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ABSTRACT

In order to substantiate the need for college level developmental reading programs, this paper reviews research conducted in the area from 1971 to 1981. The paper provides bibliographic information for 96 entries drawn from a search of ERIC, Dissertation Abstracts International, the William S. Gray Research Collection in Reading, and journals in reading and related fields. The entries contain discussions of (1) specific developmental reading programs, (2) techniques of program evaluation, (3) the relationship between student achievement and developmental program participation, (4) reading ability and semantic verification, (5) classroom climate and reading achievement, (6) individualized instruction, (7) self-concept and reading attitudes, (8) tutoring, (9) textbook readability, and (10) different teaching and learning modes. (FL)

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A TEN YEAR REVIEW OF THE RESEARCH IN DEVELOPMENTAL READING AT THE COLLEGE LEVEL

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The review covers a ten year period, 1971 to 1981. In addition to bibliographic information, a description summary of all entries is included. The following resources were searched: Education Resources Information Center (ERIC), Dissertation Abstracts International, William S. Gray Research Collection in Reading, and numerous journals in reading and related fields. There are ninety-six annotated entries that are arranged alphabetically. The review is 114 pages in length.

A TEN YEAR REVIEW OF THE RESEARCH IN DEVELOPMENTAL READING AT THE COLLEGE LEVEL

It is not without reason that developmental reading has become an integral component of today's college curriculum. To lend credence to the indispensability of this much needed component, a ten year review of the research in developmental reading at the college level was undertaken; objectives, methodologies, findings, and recommendations are reported.

The review covers a period of ten years (1971 to 1981). The following resources were consulted: Education Resources Information Center (ERIC), Dissertation Abstracts International, William S. Gray Research Collection in Reading, and numerous journals in reading and related fields. The ninety-six annotated entries are arranged alphabetically.

Abartis, Caesarea, and Collins, Cathy. The effect of writing instruction and reading methodology upon college students' reading skills. Journal of Reading, February 1980, 23, 408-13.

Determines if participation in any of four types of composition courses or two types of reading methods courses affected either reading test scores or attitudes toward

reading or writing. Subjects were 817 undergraduates.

The academic and remedial placement of students entering Bronx Community College in September 1975 by curriculum group. Research Report Bronx Community College, December 1975. (ERIC Document Reproduction Service No. ED 115 330)

This report describes the Bronx Community College (B.C.C.) freshmen class entering in September 1975, in terms of high school grade average and scores on reading-English and mathematics placement tests. As of the fall of 1974, B.C.C. enrolled a markedly higher proportion of students with high school averages below 70 percent than any other college in the City University of New York. On the basis of placement tests, 78 percent of the 1975 class were recommended for at least one remedial course in the reading-English area, and 68 percent were recommended for remedial mathematics. However, only 54 percent of the matriculated students actually enrolled in reading-English remedial courses and only 29 percent actually enrolled in remedial math courses. The actual programs of students who were placed into, but did not register in, remedial courses is examined. Eight tables show the distribution of remedial placements in English, reading, and mathematics by curriculum; the actual programs of students placed into, but not taking, remedial courses; the distribution by curriculum of high school averages for entering freshmen (general, English, mathematics, and foreign language); and the proportions of high school averages below 70 percent

for freshmen entering between September 1971 and September 1975.

Allen, Amy Roseman, and Harshbarger, Mary. Student locus of control and teaching style in relation to college reading improvement. Reading Improvement, Summer 1977, 14, 104-08.

Explores the interaction of instructional approach and pupil characteristics in affecting achievement. Subjects were eighty-five college reading improvement students who were taught in a student-controlled or instructor-controlled manner.

Anderson, William W. Evaluation of college reading and study skills problems and approaches. Reading World, March 1975, 14, 191-97.

Synthesizes recent research relating to problems evaluating the effectiveness of college reading and study skills programs.

Aron, Helen. A community college reading and study skills program: what is it, what does it do? Journal of Reading, December 1978, 22, 231-35.

Views the research related to community colleges under five areas: reading instructors, students, credit for courses in reading and study skills, general program descriptions, and concerns for the future.

Askov, Eunice, N.; Otto, Wayne; and Fischbach, Thomas. Development of specific reading skills in adult education. In Frank P. Greene (Ed.), Reading: The right to participate. Twentieth Yearbook of the National Reading Conference, 1971, 46-51.

Presents data to support a rationale for emphasis on skill development in Adult Basic Education reading classes.

Tests from the Wisconsin Design for Reading Skill Development were administered to children in grades 1 to 6.

Baranchik, Al, and Ladas, Harold. A remediation program in an urban college. Improving College and University Teaching, Winter 1979, 27, 2-5.

Evaluates the remediation program at Hunter College of the City University of New York. Two statistical studies on remediation at the college level are included with results and recommendations given in a course-by-course evaluation. Reading: The grade point average performance of 1974 freshmen who passed reading remediation did not differ significantly from the average of those who failed or did not complete the course or courses. It may be that reading skills are inherently less related to G.P.A. than the other skills for which remediation is offered, inasmuch as students with reading difficulties may compensate by becoming good listeners. In particular, the Davis Test, which is used to measure reading ability and to place students in top reading remediation, is not statistically significantly related to performance in English courses (as measured by an English G.P.A.). Since performance on the Davis Reading Test is relatively insignificant as a factor in predicting future G.P.A., it may be advisable to consider replacing this test with a better one in order to concentrate remedial effort on more severely hampered students.

Barnett, Naomi. Achievement and self-concept of male and female students in community college

remedial reading classrooms with varying observed and perceived climates (Doctoral dissertation, St. John's University, 1979). Dissertation Abstracts International, 1979, 40/05-A, 2438.

The purposes of this study were (1) to determine and compare the reading achievement of students in mandatory non-credit college remedial reading classrooms categorized by observers as either direct, neutral, or indirect in climate and categorized by students as either more positive or less positive in climate; (2) to determine and compare the self-concepts of academic ability of students in these classes; and (3) to determine and compare the reading achievement and the self-concepts of academic ability of male and female students in these classes.

Six data-gathering instruments were utilized in this study.

The population of classes from which the participating sample of classes was drawn was comprised of 34 mandatory reading remediation classes for college students whose grade equivalent score on Form C of the Nelson-Denny Reading Test fell below 8.9. From these 34 classes, 20 were selected at random to participate in the present study.

To test the hypotheses of the study, mean posttest scores on the dependent variables (reading achievement and academic self-concept) were analyzed, using two-way ANCOVA with one covariate. In each analysis of the posttest scores, pretest scores on the same variable were used as

the covariate. Further, means of males and females in each class served as the units of analysis.

The results of testing the hypotheses were as follows:

1. No significant differences in mean reading achievement were found among classes categorized by observers as having indirect, neutral, or direct climate.

2. No significant differences in mean academic self-concept found among classes categorized by observers as having indirect, neutral, or direct climate.

3. A significant difference in mean reading achievement was found among classes categorized as having more positive classroom climate and as having less positive classroom climate, with students who viewed their classroom climate as more positive having higher mean reading achievement.

4. A significant difference in academic self-concept was found between classes categorized by students as having more positive classroom climate and as having less positive classroom climate, with students who viewed their classroom climate as more positive having more positive academic self-concepts.

5. No significant difference in mean reading achievement was found between groups of students with more positive or less positive academic self-concepts.

6. No significant differences were found in any of the comparisons between male and female students' mean scores in reading or in their academic self-concepts.

Berke, George B. Employing educational cognitive style as a teaching aid for educationally disadvantaged college students (Doctoral dissertation, 1976). (University Microfilms No. 76-20, 225)

The purpose of this dissertation was to identify the effects of the educational science of cognitive style as an aid for teachers of educationally disadvantaged college students. The concept that was investigated was whether teachers who had a variety of learning methods available to

teach reading and mathematics to college freshmen could improve student performance by reference to their students' preferred methods of acquiring meaning. The vehicle for this investigation was a remedial program in reading, mathematics and writing for freshmen nursing students enrolled in a 5 year baccalaureate program. Students included in this study were all enrolled in a pre-nursing seminar in the fall quarter of 1973 at Federal City College, Washington, D.C. The measures used in this study included standard reading and arithmetic tests, writing and listening tests, cognitive style tests, student course evaluations and teachers' notes. Although the data do not support a conclusion that cognitive style mapping was a principal aid to teaching disadvantaged college students, they do suggest that educational cognitive style was a factor in the success of the mathematics on the course completion rate of the treatment group.

Bliesmer, Emery P. 1972 review of research on college-adult reading. In Phil L. Nacke (Ed.), Programs and practices for college reading. Twenty-Second Yearbook of the National Reading Conference, 1973, 2, 215-57.

Reviews over 220 research reports from September, 1971, to September, 1972, on college-adult reading.

Blum, Mark, and Spangehl, Stephen. The role of programmed instruction for sequential skill development in higher education. Louisville, Kentucky: Louisville University College, 1979. (ERIC Document Reproduction Service No. ED 197 670)

The theoretical basis of programmed instruction and

the sequential skill development approach used at the University of Louisville's University College are described, and results of student testing to determine the effectiveness of programmed instruction in the school's remedial program are examined. Nine areas of basic competencies needed for college that relate to cognitive, affective, mechanical, and psychophysical skills are identified. The remedial courses are programmed in small steps, and individualized instruction is used to promote sequential skill development. Nine hierarchies of competence in higher order cognitive processes that have been proposed by investigators are presented, and theoretical issues are analyzed. The Watson-Glaser Critical Thinking Appraisal was administered to students enrolled in remedial courses and students enrolled in a general education course (social sciences and humanities) to determine the effects of programmed instruction provided in the remedial program. The general education course did not provide the incremental drills characteristic of programmed learning. Students in both groups had similar characteristics. Pretesting and posttesting with the Watson-Glaser test indicated that students enrolled in the listening and comprehension and the critical thinking remedial courses increased their mean scores more significantly than did other students. This finding is attributed to the instructional formats of these courses.

References are included.

Bossone, Richard M., and Weiner, Max. Three modes of teaching remedial English: A comparative analysis; a pilot study. New York: Bernard Baruch College, City University of New York, 1973. (ERIC Document Reproduction Service No. ED 074 514)

The purpose of this study was to evaluate performance, backgrounds, attitudes, interests, academic needs, and problems of remedial English students at Baruch College of the City University of New York. The students were exposed to three instructional methods: computer-assisted instruction, programmed instruction, and regular classroom instruction, specifically, a linguistic approach. The study describes the objectives of the remedial courses in writing and reading skills, the three modes of instruction, and the materials and tests used, and it provides background information about the students and the factors contributing to their problems with English. Among the conclusions reached were that the majority of the students improved very little in writing ability, regardless of the instructional mode. It was recommended that greater emphasis be placed on the teaching of reading, better diagnostic procedures, individualized instruction, restructuring the remedial courses, providing tutorial services, and additional, more controlled research. Numerous tables, and three appendices, including the form for grading themes, the standards used in grading themes, and some unedited samples of student writing are included.

Bowers, John. The evaluation of a special educational opportunities program for disadvantaged college students. Final report. Champaign, Illinois: University of Illinois, 1971. (ERIC Document Service Reproduction No. ED 060 814)

This report analyzes the early academic achievement of disadvantaged students admitted to the Special Educational Opportunities Program (SEOP) at the Champaign-Urbana campus of the University of Illinois. Overall grade point averages and grades in three new courses established in rhetoric, psychology, and mathematics are examined. Both criteria are compared with customary preadmission indices, high school percentile rank, and standardized ability and achievement test measures. In the study, test scores were found to be more valid for predicting the first term GPA of SEOP students than for regular students; the predictive effectiveness of high school percentile rank was greater for regular students. Two major recommendations are made for future consideration: (1) expansion of recruitment efforts should be made so that greater numbers of SEOP applications can be screened on the basis of ability measures; and (2) the use of standardized achievement test measures should be increased for placement into and for proficiency out of remedial casework.

Carpenter, Teryle W., and Jones, Yvonne. Improving comprehension and rate gain at the college level. Journal of Reading, December 1975, 19, 223-25.

Reports results of a fourteen-week reading improvement course on 109 education students achievement in vocabulary,

comprehension, and rate assessed by a standardized reading test.

Cherney, Elaine Ethel. Relationships of reading ability of remedial track university freshmen to text readability and instructional methodology. (Doctoral dissertation, Michigan State University, 1975). (ERIC Document Reproduction Service No. ED 114 820)

The purpose of this study was to compare the reading ability of university freshmen in two remedial track courses with the readability of the assigned texts and in light of the instructional methodology employed by the instructional staff of two courses. The findings seemed to suggest that the reading ability of the students in the two remedial courses ranged from grade level nine to grade level twelve. The readability of the texts, which ranged from grade nine to graduate level, tended to be higher than the mean reading ability of the students. While the teaching staff of the two remedial courses did attempt to modify their teaching methodologies to some degree to compensate for the reading ability of the students, no modifications were made for the readability levels of the texts. None of the instructors applied readability formulas in the selection of texts, nor were they cognizant of formal concepts of readability. Informal standards for book selection were applied, such as price and adequate vocabulary load. Those students who tended to score higher on the reading tests tended to have higher final grades than the students whose reading abilities were lower.

Cline, Terry A. Readability of community college textbooks and the reading ability of the students who use them. Journal of Reading Behavior, Spring 1972-1973, 5, 110-118.

Using Nelson-Denny test scores of 279 students (80 percent of the freshman class) of a mid-Missouri community college and matching them against the Dale-Chall readability levels of seventeen textbooks used in classes by those students, the author found that eleven of the seventeen textbooks were written above the reading levels of 50 percent of the students. Perhaps the most significant finding of the study was that 52 percent of the students in all the classes had a reading ability below the textbooks used in the respective classes. Cline recommends that community college facilities place textbook readability high among the criteria in textbook selection; that where a wide range of reading abilities exists, two or three texts written at different levels of difficulty be adopted; that faculties look to nonprint materials to augment and clarify textual material; and the community colleges without them seek to establish reading and study skills programs.

Craddock, Martha Cleveland. An examination of a heuristic approach to developmental reading in freshman English classes at Lynchburg College. (Doctoral dissertation, Lynchburg College, 1975). Dissertation Abstracts International, 1975, 36/06-A, 3438.

The purpose of this study was to examine the effects of two factors, reading instuction in structural analysis

and heuristic questioning and verbal aptitude, in combination with each other and the performance variations shown by subjects between the pre-instruction and post-instruction tests reading skills as measured by the Nelson-Denny Reading Test: Revised, Forms A and B, in Freshman English Classes at Lynchburg College.

The findings indicated that subjects instructed in structural analysis and heuristic questioning did not score significantly higher in total reading skills than subjects receiving no reading instruction. Verbal aptitude did significantly affect the performance of students on tests of reading skills but did not significantly influence the effects of reading instruction. Subjects did show significant gains in total reading skills as a function of testing, but the effects of the tests were not significantly influenced by reading instruction and verbal aptitudes.

The prediction that students receiving reading instruction in structural analysis and heuristic questioning would show greater gains in total reading scores than students receiving no reading instruction was not confirmed by the results of this study. The results do indicate, however, that students in college Freshman English classes can show significant gains on tests of reading skills.

Curry, Robert L., and Roberts, Bette H. A comparison of four practice schedules in college developmental reading classes. In G. B. Schick and M. M. May (Eds.), Reading: Process and

Pedagogy. Nineteenth Yearbook of The National Reading Conference, 1971, 2, 65-70.

Assesses the effects of different practice schedules on the reading achievement of eighty male students enrolled in a college developmental reading course.

Diggs, Vera Mellott. The relative effectiveness of the SQ3R method, a mechanized approach, and a combination method for teaching remedial reading to college freshmen. (Doctoral dissertation, West Virginia University, 1972). Dissertation Abstracts International, 1972, 33/11-A, 5964.

The purpose of this investigation was to discover the relative effectiveness of the SQ3R method, a mechanized approach, or a combination method for teaching reading rate, comprehension, vocabulary, and total reading performance to remedial college Freshmen.

On the basis of findings of this research, it can be concluded that the SQ3R method is effective for students who need overall reading improvement.

Further, students who need improvement in particular areas of reading can profit from a mechanized approach provided they have experienced a systematic method of study first.

Diggs, Virginia Farrar. The relationships among classroom verbal interaction, reading achievement and attitude toward reading of college students enrolled in a developmental reading program (Doctoral dissertation, University of Cincinnati, 1980). Dissertation Abstracts International, 1980, 41/07-A, 3023.

The purpose of this study was to examine the relationship among the level of classroom verbal interaction,

reading achievement, and attitude toward reading of college students enrolled in developmental reading classes. The sample consisted of ninety-two college students and eight instructors in college reading. By assessing teacher-student verbal interactions using the Flanders System of Interaction Analysis, measures of classroom verbal interaction were obtained. The Nelson-Denny Reading Test was used to ascertain students' reading achievement, while the Purdue Master Attitude Scale was utilized to assess the students' attitudes toward reading. The reading test and attitude scale were administered in a pretest and posttest manner.

It was hypothesized that a significant, positive relationship existed between the level of classroom verbal interaction and students' reading achievement. Secondly, it was hypothesized that a significant, positive relationship existed between the level of classroom verbal interaction and students attitudes toward reading.

In order to test the hypothesis statistically, Pearson Product Moment Correlation Coefficients were computed among teachers' I/D ratios, students' reading scores and attitude scores. The results of the data analysis indicated the following: (1) There was no significant relationship between classroom verbal interaction and students' reading achievement. (2) There was no significant relationship between verbal interaction and students' attitudes toward

reading. (3) There were positive, significant relationships between students' reading achievement and their attitudes toward reading.

An additional analysis of the data using the multiple regression analysis produced the following information. It was found that students' pretest reading scores accounted for 45 percent of the variance found in posttest reading scores, posttest attitude scores accounted for one percent of the variance and teachers' I/D ratios accounted for less than one percent of the variance found. Approximately 53 percent of the variance found in the students' posttest reading scores remained unexplained, suggesting that variables other than those examined were contributing significantly to the reading achievement of these students.

The nonsignificant findings of the study suggest that further research in the area of classroom verbal interaction in college developmental reading classes is needed.

Dowdle, Steven Leon. An analysis of the relationship between the self-concept and academic performance of high and low performers in a collegiate school of business (Doctoral dissertation, University of Arizona, 1977). Dissertation Abstracts International, July-December 1977, 38(3). (University Microfilms No. 77-18, 570) (ERIC Document Reproduction Service No. ED 155 681)

In this study, it was assumed that self-perception is a determinant of behavior and more specifically, that poor academic performance is largely a consequence of faulty perceptions of the self. The purpose of this study was,

therefore, to verify, in a collegiate setting, the relationship between self-concept and academic performance in order to develop policy and procedure dealing with the performance phenomenon.

Full-time freshmen students at the University of Arizona College of Business and Public Administration constituted the population from which a sample of fifty was selected to examine the relationship between the self-concept and academic performance. The students were classified as high performers (HP) or low performers (LP) based on a discrepancy range of the difference between actual and predicted grade point average.

It was hypothesized that low performers would have a significantly lower (less positive) self-concept score than would high performers.

The instrument selected to measure self-concept was the Tennessee Self-Concept Scale. Mean scores for each of 19 subscales were provided for each group. A *t* test for differences between independent means yielded statistically significant differences for the true-false ratio and the personality integration scale.

The HP group had higher scores on the other subscales than did the LP group; however, the differences were not statistically significant.

It was concluded that the LP group did not have a lower self-concept than did the HP group. The hypothesis

was not supported by the results of the study.

Despite reports in the literature which confirm a relationship between self-concept and academic achievement the results of this study do not support their conclusions. This study and others cited form the basis for a minority opinion that self-concept and academic achievement may not be related.

Recommendations for future research included a follow-up of this study to examine effects of academic success or failure on the self-concept over time, a study of the differences in the self-concept of students by curricula, and a replication of this study with a larger sample.

Drummond, Robert J.; Smith, R. Kent; and Pinette, Clayton A. Internal-external control construct and performance in an individualized community college reading course. Reading Improvement, Spring 1975, 12, 34-38.

Investigates the relationship of locus of control and reading achievement before and after a reading improvement course. Subjects were thirty male freshmen.

Eagle, Norman. The academic and remedial placement profile of students entering Bronx Community College in September 1980, by curriculum group. New York: Bronx Community College, 1980. (ERIC Reproduction Service No. ED 192 857)

The class entering Bronx Community College in September 1980 is described in this report in terms of high school averages (general, English and mathematics); placement into remedial or pre-college level English,

reading, and mathematics courses; and subsequent enrollment in these courses. The data, compared on a series of tables with findings from similar studies conducted annually since 1972, indicate that while 62 percent of the entering students were placed in remedial English or reading courses, 70 percent of the students actually enrolled in the courses. Conversely, while 71 percent of the students were placed in remedial mathematics courses, only 55 percent of the students actually enrolled in the classes. Of the 1,283 known high school averages, 31 percent fell below .70 and 14 percent fell below .65. Since the discontinuation of open admissions policies and the implementation of progress standards in 1976-77, the portion of severely underprepared students (those with a high school average below .70) declined significantly in English and general academic achievement, but not in the areas of mathematics and foreign languages. The number of students taking college level courses, rather than required remedial courses, increased steadily from 1977 to 1980. Each of the data tables in the study report provide a breakdown by 14 curricular areas.

Emeruwa, Leatrice Joy Williams. Students evaluative perceptions of two modes of developmental reading instruction at an urban community college (Doctoral dissertation, University of Akron, 1981). Dissertation Abstracts International, 1981, 41/09-A, 3849.

This study examined the differences between two research groups of students as to their perceptions or

evaluative range of two developmental reading instructional modes at an urban community college. One group was taught in a tutorial setting; the other group was taught in the traditional classroom. The population under study was operationally defined as those developmental students who completed the survey instrument and were enrolled in 096 Reading Improvement during Spring and Summer Quarters, 1979 at the Metropolitan Campus of Cuyahoga Community College.

On the basis of the data analysis several program recommendations were made: (1) continue the mastery learning concept; (2) develop a higher level developmental reading course; (3) as a cost effective measure return most of the Learning Center tutorial classes to regular classrooms, but support these classes by establishing a Communications Laboratory; and (4) maintain the developmental education program as a separate division with its own director, faculty and budget.

Fairbanks, Marilyn M. The effect of college reading improvement programs on academic achievement. In Phil L. Nacke (Ed.), Interaction: Research and practice for college-adult reading. Twenty-third Yearbook of The National Reading Conference, 1975, 105-14.

Examines seventy-nine studies which used GPA as criterion for evaluating college reading improvement programs to gain information about students, program emphasis, and selected factors relating to content and operation of the programs.

Farrell, Thomas James. Opening the door: An analysis of some effects of different approaches to educating academically high risk students at Forest Park Community College. Forest Park, Il.: Saint Louis University, 1973. (ERIC Document Reproduction Service No. 107 324)

The General Curriculum (GC) at Forest Park Community College in Illinois was designed as a one-semester initial entry program for high-risk students. The full-time GC student was required to take a series of basic academic courses in reading, writing, and mathematics, a human potential seminar, a transfer course (Applied Accounting, Introduction to American Politics, Introduction to Biology, or Introduction to Sociology), and a general studies course (Basic Humanities, Basic Science, Basic Sociology, City Politics, or Contemporary Science). Such students spent 19 hours per week in class, but earned only 11 or 12 credits depending on the transfer course taken. This study was conducted in order to determine the extent to which academically high-risk students who enter the GC program succeed in college as compared to academically high-risk students who enter the college in the traditional manner. The current program, the method of student selection, and relevant literature are reviewed in detail. Results of an investigation of student records indicate that GC students did not earn higher grades or complete more credit hours and that the program seemed to work against them in that they were required to take a series of basic skills courses which did not count toward a degree. Recommendations are

made and a bibliography is included.

Flippo, Rona Fleig. Comparison of college students reading gains in a developmental reading program using general and specific levels of diagnosis (Doctoral dissertation, University of Florida, 1979). Dissertation Abstracts International, 1979, 41/01-A, 179.

Comparison of college students reading gains in a developmental reading program using general and specific levels of diagnosis. 118 pages.

This study was designed to compare the effects of specific and general diagnosis on post secondary students progress in selected reading subskills after developmental instruction. Instruction was prescribed from the specific results of a diagnostic reading test for some students and from the general and more traditionally used results of a survey reading test for other students.

The selected subskills were literal comprehension inferential comprehension, word meaning, word parts, phonetic analysis, structural analysis, scanning and skimming, and fast reading as measured by the Stanford Diagnostic Reading Test (SDRT), Blue Level (1976), and vocabulary and comprehension measured by the Nelson-Denny Reading Test (NDRT) (1973).

The sample in this study consisted of 226 students from an original group of approximately 450 Freshmen enrolled in fifteen different sections of "Effective Reading" in the fall semester 1978 at the University of South Carolina's College of General Studies, Columbia,

South Carolina. These students were required to take the 3 credit course because of low Stanford Achievement Test scores. Students were randomly assigned to experiment ($x = 112$) or control ($x = 114$) treatments. The nine instructors that taught the classes had approximately an equal number of experimental and control students in each of their sections. Experimental and control treatments were provided by graduate assistants (supervised by the researcher) during lab time. All students were treated with two hours per week of lab instruction. Lab instruction was based on each student's individual prescription. On the basis of information from the subtests of the diagnostic instrument (SDRT), individual prescriptions for reading skill improvements were written for the experimental students. Only the information from the subtests of the survey instrument (NDRT) was used in writing prescriptions for the control students. The original diagnoses from the pretest information on students in both treatments were not altered in any way throughout the remediation. Both the control and experimental students had the same treatment with the exception of the amount of diagnostic information available for counseling and prescribing instruction during lab sessions. The gain in the ten selected subskills of reading was measured by the pretest/posttest differences on the SDRT and the NDRT. A t-pool test was used with the .05 level of significance.

There was a statistically significant difference in the means of the gain scores of the experimental students and the control students in the subskills of word parts, fast reading, and vocabulary, the observed gain of the experimental group was substantially higher than that of the control group, but not significantly higher at the .05 level.

This study's findings generally support the conclusion that post-secondary students do better in a developmental reading program that utilizes more specific diagnosis and prescription than in a reading program that utilizes more general testing of reading abilities. Additionally, gains made in certain reading skills may be reflected in the results of diagnostic reading tests and not in the results of the survey reading tests which are more commonly used.

Florio, Charles Bernard. An assessment of the effectiveness of remedial reading courses at San Antonio College (Doctoral dissertation, University of Texas at Austin, (1975). Dissertation Abstracts International, 1975, 36/05-A, 2664.

An assessment of the effectiveness of remedial reading courses at San Antonio College. 202 pp.

This study investigates the effectiveness of remedial reading courses for nontraditional students in San Antonio College, a large, urban, and public community college in Texas. The subjects were students who enrolled the fall semester of 1972 and persisted through the fall semester of 1973. The remedial reading courses were described in terms

of means of placement, goals, objectives, instructional units, materials, methods, pre-assessment, instructional activities, post-assessment, remediation and evaluation. Some of the findings were: females tended to score higher, though not significantly higher, on the posttest and earned significantly more grade points than did males; among students who completed reading there was no significant difference in posttest scores and grade points earned between unlike ethnic groups; Mexican-American and non-Mexican-American surnamed students who needed and completed reading did not earn significantly more grade points than did similar students who needed but did not take reading; and those students who had ACT social studies scores of 15 or above earned significantly more grade points than those who had scores of below 15. Proposals for increasing the effectiveness of remedial reading were offered.

Friedlander, Jack. Why don't poorly prepared students seek help? Los Angeles, Cal.: Center for the Study of Community Colleges, 1981. (ERIC Document Reproduction Service No. ED 203 901)

In light of the substantial commitment of resources to counseling and institutional support services, a study was undertaken to determine the extent to which these services are reaching their intended audience. The study drew from an in-class survey of 6,426 students at a large, urban community to: (1) indicate their degree of confidence in their reading, writing, arithmetic, algebra, science, and

study skills; (2) identify which if any of the college's support services they had used; and (3) state their reasons for not using these services. The survey revealed that of the students who did not feel confident in one or more skill areas less than 30 percent took advantage of a remediation support program. Of those students lack confidence in their skills and not using a support service, approximately 50 percent said they did not need the service and 35 percent stated that they lacked the time to use the service or that it was offered at an inconvenient time. In light of these findings, community colleges should consider whether they should take steps to insure that students with skill deficiencies receive the remediation they need; whether a demonstration of basic skills and the time to strengthen their skills should be permitted to enroll in courses.

Fronk, Robert H. The effect of student reading level, type of instructional material, and mode of instruction on time required to reach mastery-level learning. Science Education, October/December 1975, 59, 487-91.

Investigates criterion learning as a function of reading achievement, listening versus reading, and task (manipulative application of instructions versus non-manipulation). Subjects were forty-eight undergraduates divided into high, average, and low reading groups.

Gaston, Eugene Milo. A descriptive analysis of developmental program curriculums funded by Title III Grants at seven select developing institutions of higher education. Kansas State: Kansas

State University, 1977. (ERIC Document Reproduction Service No. ED 155 681)

This study provides a descriptive analysis of the curriculum of developmental programs funded by Title III Grants at seven select developing academic institutions of higher education. The study communicated evaluative information concerning developmental programs that cater to low-income underprepared disadvantaged students. English, reading, and mathematics provide the content emphasis of the curriculum developmental programs identifie in this study. Morphological analysis of programs, academic preparation of personnel, instructional strategies, perceptions of administrators and students which pertain to strengths and weaknesses of programs, and holding power of the curriculum developmental programs under investigation were discussed. A questionnaire of nine sectional parts, self-administering, was mailed to seven directors of curriculum developmental programs funded by Title III Grants. Separate questionnaires of two sectional parts were also mailed to these seven directors for the administering of these questionnaires to sophomores who had the experience with curriculum developmental programs funded by Title III Grants. A total of 182 subjects participated in this study. Descriptive narratives and frequency distributions were used to present the data.

Gullo, Richard Joseph. The relationship between remedial math and reading courses and Accounting I final exam scores at Community College of Alle-

gheny County, Boyce Campus (Doctoral dissertation, University of Pittsburgh, 1980). Dissertation Abstracts International, 1980, 41/06-A, 2572.

This study addressed the following problem: For those students who need remedial reading or mathematics or both, is there a difference between scores on the Accounting I final examination for those who take Accounting I prior to taking remedial courses and those who take remedial courses and Accounting I during the same term? Students were placed into groups based upon the scores obtained on mathematics and reading placement tests. Of those students who needed only remedial math based upon the placement tests, one-half were placed into remedial math and Accounting I; the remaining one-half received Accounting I and no remedial math. Of those students who needed remedial reading based on their placement test results one-half were placed into remedial reading and Accounting I; the remaining one-half received Accounting I and no remedial reading. Of those students who needed both remedial math and reading, one-half were placed into remedial courses and Accounting I; the remaining one-half received Accounting I and no remedial courses. At the conclusion of the fall term, 1979, after accounting for drops and adds and withdrawals, 124 students who participated in this study sat for the Accounting I final exam. The groups were then compared by using the analysis of covariance procedure, with the students' reading and math scores obtained on the

placement test as covariates, to determine if a difference existed between Accounting I final exam score means for each pair of groups. Groups compared were math with no math; reading with no reading; and both remedial math and reading with no remedial math and reading. The results indicate no significant difference at the .05 level between the group that had math and the group that had no math on the Accounting I final exam. There was also no significant difference at the .05 level in Accounting I final exam scores between the group that had reading and the group that had no reading. However, there was a significant difference at the .05 level between the group that had both remedial reading and math compared with the group that had neither remedial course on the Accounting I final exam. The results of the study indicate that students who need remedial work should be encouraged by advisors to enroll for such courses, because in all three situations studied, students who took remedial work scored higher on the Accounting I final exam.

Gunselman, Marshall. A feasibility study for individualized instruction of college freshmen in two basic areas of general education. Oklahoma City, Oklahoma: Oklahoma Christian College, 1971. (ERIC Document Reproduction Service No. ED 059 698)

"A major problem in higher education today is that of providing educational programs for students of educational backgrounds. One possible solution is to use the systems approach in the basic studies of general education to

provide instructional patterns that can be accommodated to the individual needs of all students." This study set out to evaluate the feasibility of such an approach by developing model courses in mathematics and literature. The models were used experimentally in the summer of 1971. Students began with pretests which measured their knowledge in each course; then they were directed to and through the instructional units they needed. The results show that students accepted the plan enthusiastically, that most students not only finished the courses but finished with generally higher scores than are made in typical beginning courses, that the system is so economically efficient that average course costs were less than $13 a credit hour, and that instructors were able to devote more time to individual needs.

Gutherie, John T.; Seifert, Mary; and Kline, Lloyd W. Clues from research on programs for poor readers. In S. Jay Samuels (Ed.), What Research Has To Say About Reading Instruction. Newark, Del.: International Reading Association, 1978.

Reviews the research literature for clues to the effectiveness of remedial reading instruction, and for methods, materials, and organizational procedures which are most helpful.

Haburton, Eleanor. Impact of an experimental reading-study skills course on high-risk student success in a community college. In P. David Pearson (Ed.), Reading: Theory, research and practice. Twenty-Sixth Yearbook of the National Reading Conference. Clemson, S.C.: National Reading Conference, 1977.

Seeks to determine the impact of a reading-study skills course on the academic success of thirty-six high-risk community college students. Experimentals were matched with thirty-six controls for age, sex, race, class load, voluntary participation in a previous basic reading course, and pretest reading comprehension score below the thirtieth percentile on the Iowa Silent Reading Test.

Hanson, Karen Mae Brown. The relationship between reading ability and semantic verification tasks (Doctoral dissertation, University of Minnesota, 1977). Dissertation Abstracts International, 1977, 38(3), 1189-A.

This study collected and analyzed data pertaining to four semantic verification tasks and decoding ability of good and poor adult readers. The decoding scores and correctness, confidence, and latency of response to the semantic verification tasks were compared.

Sixty students from a suburban Minneapolis two-year college served as subjects. Thirty each were randomly selected from those scoring at or above the 27th percentile on the McGraw-Hill Reading Test, Form B (Raygor, 1970), two-year college norms. The subjects were asked to read short paragraphs and for each respond true or false to items representing four semantic verification tasks: integration, unprimed category-prototype relationships, primed category-prototype relationships, and verbatim recognition. The experimenter-constructed test was individually administered on a rear-screen viewer with

latency subject-controlled by a single button attached to both a tachistoscopic lens and a timer. Responses were collected regarding latency of paragraph reading, correctness, confidence, and latency of response to the four item types.

Good and poor readers were also given the Diagnostic Reading Test: Word Attack Test (Triggs et al., 1966) to determine if decoding skills were related to adult reading ability and semantic verification.

Mean scores of good and poor readers on the decoding measure at a $p < .001$ level when compared by a t-test. Correlations between decoding and reading ability, decoding and semantic verification were .6522, .5159, and .7125 respectively. The correlation of decoding to the fastest and slowest true mean latencies for the semantic verification task were -.5424 and -.5571, respectively. On the semantic verification task analysis of variance revealed interaction for correctness of response between ability and item type and item type and true-false treatment conditions ($p < .01$). Confidence of response on a scale of 5 (most confident) to 1 (least confident) was similar for the two groups, the range of mean confidences being from 4.61 to 4.99.

Ranking of correctness and confidences for true and false conditions resulted in identical orders for both groups. From most correct and confident to least correct

and confident the order was unprimed category-prototype, primed category-prototype, verbatim recognition, and integration.

Response latency, analyzed with paragraph reading time as a covariate, indicated that good readers more rapidly processed both true and false items; that the rates of processing were not parallel for the two ability groups; that the tasks had quite different interaction patterns under true and false conditions; and that good readers more rapidly ($p < .003$) processed semantic information under all conditions with the exception of false verbatim recognition.

A K-R_{20} analysis of the semantic verification instrument indicated that individual items were not difficult, nor did they discriminate between high and low scoring subjects within item type. Overall reliability, however, was .81.

Good readers exceeded poor readers in all aspects of the decoding and semantic verification tasks. Differences in semantic verification speed are attributable not only to reading skills but to time required for semantic processing. Relationships do exist between decoding ability, semantic verification, and reading ability.

Differences in decoding skills indicate that this skill may still be useful for adults and should be considered as a possible instructional procedure.

Poor readers should be encouraged to see reading as a means of adding new learnings to old, requiring integration of information during the reading process, as opposed to a discreet task of attaining isolated information from a written passage.

Hardison, Diana Dixon. A study to determine the comparative effectiveness of classroom teaching and a video self-instruction unit for developmental and degree-program students (Doctoral dissertation, Virginia Polytechnic Institute and State University, 1977). Dissertation Abstracts International, 1977, 38(3), 1189-A.

The study attempted to determine if library skills in a community college could be taught more effectively within a one-class-period time frame by a video self-instruction unit or by classroom teaching. The experiment also considered the comparative effectiveness of both modes of instruction when used in groups of developmental and degree-program students. The study was conducted at a multi-campus community college in the fall of 1976. Fourteen English classes (seven developmental and seven degree-program) participated, yielding 120 subjects after attrition. Each class was separately randomized into two groups. The first group reported to the classroom as usual for instruction in library skills; the second group completed a video self-instructional unit on their own during a designated time period. Instructors of the classroom groups administered post-tests to their students immediately after the lesson. For students in the video

self-instructional groups, members of the Learning Resources Center Staff administered the post-tests individually. Delayed post-tests were administered to students in both types of groups, by the instructor, 12 days after the "classroom teaching" session. The analysis of variance with repeated measures revealed no significant differences between those taught by the classroom method, and those taught by a video self-instruction unit, for both times of the testing.

Hargrove, Rachel Dailey. A study of the relationship between Piagetian cognitive developmental level and reading comprehension in college science students (Doctoral dissertation, State University of New Jersey, 1977). Dissertation Abstracts International, 1977, 37/12-A, 7661.

The major purpose of this investigation was to determine the relationship that exists between the Piagetian cognitive level of the student and the reading comprehension of science content materials.

The subjects were 50 college students, 27 females and 23 males selected from introductory biology courses. The socio-economic level of the sample is best described as ranging from low to middle class. Comparability of the sample with respect to sex and aptitude (as measured by SAT Verbal and Math scores) was suggested by statistical analyses.

Three Piagetian-type tasks and cloze comprehension passages requiring local operations similar to those employed in solving the tasks were administered. The

formal operations tapped by the tasks were: combinatorial reasoning--the chemical task; proportional reasoning--the balance task and "Mr. Tall and Mr. Short." Cloze tests were prepared from passages selected from the biology text and a nonscience text. Passages were rated at approximately the eleventh grade level of difficulty. A standardized measure, Davis Reading Test, Form 1B, Series 1, was also administered, thus permitting comparison with a national sample.

Each subject was tested individually on the Piagetian tasks; the reading tests were administered to groups.

Subjects were classified as formal operational on the basis of successful completion of two of the three formal level tasks. All non-formal subjects in this study were classified as concrete operational.

Results of chi-square analyses of the data revealed that the number of formal subjects reading above the median on the Davis Reading Test significantly exceeded the number of concrete subjects. t-Test analyses indicated that formal subjects had significantly higher mean comprehension scores than concrete subjects on cloze science and nonscience passages. The results of correlational analyses revealed significant relationships between the variables: Piagetian cognitive level, Davis Reading Test Cloze Test I and II (science) and Cloze Test III (nonscience), for formal and concrete subjects.

The results were interpreted as indicating that (1) the Piagetian cognitive development level of the student is a significant variable in the comprehension of written science materials; (2) the logical complexity of the written passage is a significant determinant of comprehension difficulties. Unfortunately, logical complexity is not measured by readability formulas; (3) logical reasoning ability and reading comprehension are complementary processes, dependent upon the development of the logical operations posited by Piaget.

Recommendations for curriculum implementation and further research were presented.

Hayward, Kristina G.; Orlando, Vincent P.; and Bliesmer, Emery P. Effectiveness of a study management course for "non-traditional" students. In P. David Pearson (Ed.), Reading: Theory, research and practice. Twenty-Sixth Yearbook of the National Reading Conference. Clemson, S.C.: National Reading Conference, 1977.

Measures the effects of a special improvement course, including the teaching of reading, at an Eastern university on the overall achievement and academic performances of fifty-four students who registered for the study management course.

Hedges, Larry V., and Major, Kenneth. A longitudinal comparative study of a process oriented tutorial program. La Jolla, Calif.: California University, 1976. (ERIC Document Reproduction Service No. ED 126 835)

The grade point average (GPA) of Educational Opportunity Program (EOP) freshmen who received tutoring through

the OASIS Provosts' Tutorial Fellowship Program and EOP freshmen who did not receive such tutoring were compared at the University of California, San Diego. A one-way analysis of covariance using high school GPA, Scholastic Aptitude Test (SAT), mathematics score, and SAT verbal score as covariates revealed significantly higher adjusted grades for the tutored group in each of three replications over a period of three years. These students were also tracked through their sophomore year and in two of three replications, the students who were tutored as freshmen also had significantly lower sophomore year attrition than the students who were untutored as freshmen.

Hoeppel, Frank Charles Jr. A taxonomical analysis of questions found in reading skills development books used in Maryland Community College Developmental/Remedial Reading Programs (Doctoral dissertation, The American University, 1980). Dissertation Abstracts International, 1980, 41, 5041-A.

The purpose of this study was to categorize questions found in reading skills development books used in Maryland Community College Developmental/Remedial Reading Programs via the Bloom Taxonomy of Educational Objectives: Cognitive Domain in order to determine: (1) the number of questions (observed frequencies) per taxonomy category, (2) whether there was a significant difference between the observed frequency for the expected frequency of questions per taxonomy category at the .01 level of significance, (3) whether there was a significant difference among the

categories.

Methodology of the study was as follows. A survey taken of Maryland Community College Developmental/Remedial Reading Programs indicated the use of a wide variety of reading skills development books from which 62,483 questions was selected for analysis via the Bloom Taxonomy of Educational Objectives: Cognitive Domain. After a rater reliability factor of 96 percent was established, each of the 555 randomly selected questions was categorized into one of the six categories of the Taxonomy.

Findings of the study were as follows. The 555 randomly selected questions were classified according to the Bloom Taxonomy of Educational Objectives: Cognitive Domain as follows:

Category	Number of Questions
Knowledge	145
Comprehension	408
Application	2
Analysis	0
Synthesis	0
Evaluation	0

Statistical analyses of the data were performed to answer the questions posed by the study. A significant difference was found among the six categories into which 555 questions were placed after analysis by the Bloom Taxonomy of Educational Objectives. The significant difference was shown by the use of a one sample chi-square test with five degrees of freedom at the .01 level of significance.

Inordinate differences between categories were apparent through the observation of the observed frequencies. A statistical analysis to indicate significant differences between categories was unwarranted. However, a test for significance of difference between two proportions was carried out between the knowledge and comprehension categories since they contained 26.12 percent and 73.51 percent of the questions, respectively, accounting for 49.63 percent of all the questions.

The application category contained .37 percent of the remainder of the questions. The three highest levels of thinking, represented by the analysis, synthesis, and evaluation categories, were allotted no questions.

Conclusions of the study were as follows. The analysis of 555 randomly sampled questions indicated that reading skill development books used in Maryland Community College Developmental/Remedial Reading Program do not offer an equal amount of thinking determined by the six levels of Bloom's Taxonomy of Educational Objectives. Since 99 percent of the questions were categorized within the two lowest levels of thinking, very little stimulation of the higher thinking processes was offered via the questions used in the reading skills development books analyzed in this investigation.

Implications of the study were as follows. The authors, publishers, administrators, and educators who deal

with reading skill development books: (1) need to become more concerned with the higher level thinking development of students; (2) need to become more knowledgeable about the use of cognitive level analysis instruments such as Bloom's Taxonomy; (3) need to estimate the intellectual capabilities of these students on a higher level; (4) need to recognize that reading material on a higher cognitive level may build higher reading motivation.

Recommendations. It is recommended that: (1) a greater amount and a more balanced representation of higher cognitive level questions be included in reading skills development books by authors and publishers; (2) authors, publishers, instructors, and administrators become more familiar with the workings of cognitive level analysis instruments such as Bloom's Taxonomy; (3) each reading skill development book present the types of cognitive level questions used and their percent of representation within the book.

Hosey, Joseph G., and Rapaport, Chester R. Introduction to business-college remedial reading. Journal of Business Education, October 1976, 52, 22-23.

Examines the achievement of 295 day session students enrolled in a Business Organization and Management course back-to-back with a College Reading and Study Skills course at Queensborough Community College, Bayside, New York in 1975. Based on information gained from The Cooperative English Test, The California Reading Test, and individual

student's instructional needs, students were assigned to the College Reading and Study Skills courses. While the number of students involved in the study was small and no rigid experimental controls existed on distribution or selection of students, it was noted that 73.5 percent of the back-to-back BEO3 class received a grade of C or better in the Business Organization and Management class, 55.9 percent of those who took the regular BEO3 course received C or better, and 62.6 percent of all students in the Business Organization and Management courses received C or better. The high number of BEO3 students who received a C or better was encouraging, since this group was officially classified as having reading difficulty. Percentage of dropouts among back-to-back classes was better than the dropout rate of students in all the Business Organization and Management section. This small sample indicated that the students who took the college Reading and Study Skills course back-to-back with the Business Organization and Management course did as well, if not better, than those students who took the regular college Reading and Study Skills course, while taking the Business Organization and Management course.

Hunter, Charles F. Clozing the gap: an approach to solving reading problems at San Jose City College. San Jose, Calif.: San Jose City College, 1971. (ERIC Document Reproduction Service No. ED 049 895)

The program at San Jose City College uses the Davis

Reading Test and the Iowa Silent Reading Test as part of its entrance battery and assigns students to either one of two noncredit, pass-fail, remedial English classes on the basis of scores on the speed section of the Davis test. Regular English instructors, reading teachers, and graduate students in English acting as paraprofessionals teach the remedial reading and writing sections. Emphasis is on skill development, beginning with isolated skill areas and working toward integration of skills in successful critical reading. Machines such as tachistoscopes and language masters supplement class instruction, and the use of clozure activities to strengthen vocabulary and comprehension has been particularly successful. Evaluation of 310 students in remedial sections in the spring of 1970 showed an average gain of nearly two years as measured by the Iowa Test. Future plans for the program include extending instruction into various departments of the college. References are included.

Huslin, Ronald A. What's happening in college and university developmental reading programs: Report of a recent survey. Reading World, March 1975, 14, 202-14.

Discusses and analyzes findings from a questionnaire related to various aspects of the reading program. Data are based on 177 returned questionnaires.

Katz, Constance, and Wright, Fred. The effects of a reading and study skills program on academic performance and perseverance. Journal of General Education, Summer 1977, 29, 89-96.

Evaluates a course which emphasizes reading, speaking, vocabulary development, and a variety of study skills such as note-taking, outlining and summarizing. Specifically, the investigators were interested in finding academic or behavioral index of differences between a group taking the course and a similar group of students not taking the course. Students in both groups had high school grade point averages of 70 percent or below and were male and female open-admissions students who entered John Jay College of the City University of New York in the fall of 1970. Students who took the course decreased their course drop rate, while control students increased their course drop rate. Not dropping a course was considered evidence of motivation to persevere. The failure rate was higher for the experimental group than for the control group in semester one, though not significantly so, and the two were almost equal by the second semester. Tables accompany the study.

Kerstiens, Gene. The effects of a typical community college developmental reading course on the phonics disablement of students. Ft. Lauderdale, Florida: Nova University, 1978. (ERIC Document Reproduction Service No. ED 148 422)

A research review indicated that, while the typical community college developmental reading course does not pay special attention to students with phonic disabilities, many students enrolled in such courses are phonically disabled. Therefore, a study was executed to learn whether

this typical developmental treatment effectively diminishes students' phonic disabilities.

The California Phonics Survey, Forms 1 and 2, was the primary measuring instrument used in this study. Students enrolled in and completing a developmental reading course and whose pre-test scores indicated phonic disablement (Experimental Group: N = 106) were post-tested to learn that their mean gains were significant at the .05 level. Students completing a developmental writing course (Control Group: N = 113) were measured similarly to learn that their mean gains were also significant at the .05 level. When the mean gains of these groups were compared, the superior gain enjoyed by the experimental group was not significant. Additional data were analyzed to learn that (1) sex, instructional time of day and duration of course are not factors that influence students' decrease in phonic disabilities; (2) students' degree of phonic disablement is not predictive of success (grade) in a developmental reading course; and (3) students' entry-level (pre-test) scores on the California Phonics Survey are highly predictive of dropout (.01 level of confidence).

Principal conclusions were that students completing a developmental reading course do not receive treatment that significantly reduces their phonic disabilities and that students who are grossly disabled are not likely to survive the course.

Recommendations based upon this study's findings included (1) the establishment of intensive short-term courses to effectively train developmental reading instructors to teach aural decoding skills; (2) the institution and study of experimental courses designed to specifically treat students' phonic disabilities; (3) the initiation and study of experimental mini-courses and/or individualized self-instructional formats designed to teach students phonic skills while students are concurrently enrolled in a developmental reading course; and (4) the initiation of a pilot program designed to learn whether students enrolled in reading development classes can receive effective training in phonic analysis within the context of the course itself.

Kerstiens, Gene. Yet another look at college developmental reading courses. In Gwyn Enright (Ed.), Proceedings of the Twelfth Annual Conference. San Diego: Western College Reading Association, 1979.

Investigates whether students in a college developmental-reading class will appreciably reduce phonic disabilities. Subjects included 106 experimentals and 113 controls.

Kurzman, M. The reading ability of college freshmen compared to the readability of their textbooks. Reading Improvement, Fall 1974, 11, 13-25.

Study undertaken to find out how the reading ability of freshmen at H. H. Lehman College, Bronx, New York, compared with the readability of their textbooks. The

selected group were some 81 students who were taking courses in the Social Sciences. A Nelson-Denny Reading Test showed their average reading grade level to be 10.4--2 years on the average below acceptable college reading level ability. The textbooks used by the subjects were appraised in the following ways: (1) application of a readability formula for ascertaining the reading grade level of the books; (2) an estimation by two Reading Specialists of the reading level of the texts; (3) an estimation by the instructors in the Social Science classes of the readability of their books; (4) an estimation of the relative difficulty of the books by the students using them; and (5) an analysis by the Social Science instructors of other aspects of readability. This study confirms the findings of many other studies dealing with the problem. The Social Science textbooks used by a group of college freshmen were in most cases many grade levels above their reading ability. For use in self-study, which is one of the main objectives of a college education, the textbooks were found to be too difficult for many of the students to comprehend adequately or properly. Without special assistance on the part of the instructor, without special efforts to improve reading skills, or without high motivation on the part of the student, the disparity between the students and the readability of their texts can lead only to frustration.

Lesnick, Howard Michael. A study of the effectiveness of the developmental reading program at

Northern Virginia Community College's Annandale Campus (Doctoral dissertation, George Washington University, 1980). Dissertation Abstracts International, 1980, 41/06-A, 2468.

A study of the effectivenes of the developmental reading program at Northern Virginia Community College's Annandale Campus. 106 pages.

The purpose of this study was to determine the effectiveness of three developmental reading course options at the Annandale Campus of Northern Virginia Community College. The options were a course in reading improvement, a verbal studies laboratory, and simultaneous enrollment in both. Reading comprehension improvement as measured by post-course scores on a cloze-type test adjusted for pre-course scores, was the dependent variable student status (e.g., terminal, transfer) and sex, and the course options selected, were used as primary independent variables, and were studied by an analysis of covariance (with interactions tested). The three course options were analyzed by a t-test. Other independent variables, demographic and matricular, were analyzed by simple frequency distributions.

By use of the analysis of covariance, no significance was found at the .05 level between the mutually exclusive course options with respect to reading comprehension improvement; however, t-tests performed upon the unadjusted means of the pre- and post-treatment cloze scores for each of the three groups showed that each of the course options

did have a significant effect (at the .05 level) in improving the reading comprehension of the students in the sample.

Further research along the lines of this study and the use of standardized tests in developmental reading programs were recommended. The cloze tests should be retained at the school for diagnostic and teaching purposes only. Research should be conducted to determine: (1) persistence and academic performance of developmental students after leaving the developmental programs and entering regular college credit programs; (2) the influence of various methods and types of treatment in developmental reading on the ability to read technical material; (3) the correlation between traditional programs and instructional processes in effecting improved reading comprehension for developmental students; and (4) the importance and optimal numbers for class size in developmental reading instruction.

Levinson, Betty, and Cohn, Florence. A summer "hype" for high risk readers. In Gwyn Enright (Ed.), Proceedings of the Twelfth Annual Conference. San Diego: Western College Reading Association, 1979, 25-30.

Describes and presents data on the effectiveness of an intensive six-week reading program designed for entering college freshmen scoring below 450 on the CEEB English Composition Achievement Test.

Losak, John. Do remedial programs really work? Personnel and Guidance Journal, 1972, 50, 383-386.

Evaluates and measures a remedial reading-writing program at Miami-Dade Junior College. Students were selected for this study on the basis of low scores on the Schools and College Ability Test, Form 1A. If their scores placed them in the 21st percentile or below on local norms, they were designated as academically underprepared. An experimental (E) group of 427 students was placed in the remedial reading-writing course (Eng. 090). Seventy-three students with the same level test scores were placed in the regular college-level English course (Eng. 101) as a control (C) group. Students were assigned to the two groups on a random basis and neither they nor their teachers were aware that an experiment was being conducted. This remedial program is best described as a traditional attempt to improve basic skills in reading and writing. It emphasizes correction of reading faults, improvement of vocabulary, location of key words and ideas, writing of simple sentences correctly, and completion of assignments on time. The program's effectiveness was measured by participating students' improvement in standardized reading and writing test scores, overall grade point averages, attrition rate, and success during the second term in regular college courses. At the end of the fall term 1967-68, the experimental students earned a significantly higher grade point average ($p < .001$) than the control students. Yet the mean of 1.83 (on a 4.00 scale) for the E

group was well below the 2.06 grade point average for the entire freshman population. The higher grade point average for the experimental group might reflect the less stringent demand typically made of remedial students. When mean grade point average differences for the winter term were compared, the mean for the E group dropped from 1.83 to 1.59, while the mean for the C group remained at 1.47. Further analysis revealed no differences by race or sex. The standardized test reading measure used at the end of the fall term revealed no differences in the two groups. This failure of remedial reading-writing courses to improve participating students' reading scores any more than the regular college English course did, is a striking example of the program's lack of success. Both groups improved, but merely having attended college for one term in the regular program without special reading instruction is apparently as effective as the remedial efforts provided in the English 090 course. This study demonstrated that the purported benefits of the remedial reading-writing program at Miami-Dade Junior College does not provide participating students any significant academic advantages over similarly underprepared students who do not participate in the remedial program.

McMurray, Mary; Morgan, Ray; and Laffey, James. College students' word identification strategies. In Michael L. Kamil and Alden J. Moe (Eds.), Reading research: Studies and applications. Twenty-Eighth Yearbook of the National Reading

Conference. Clemson, S.C.: Clemson University, 1979.

Describes the nature and results of an interview study of thirty good and thirty poor college-level readers concerning their self-perceptions of how they decoded and comprehended words. Good readers were defined as reading two years above grade norms, and poor readers as two years below grade norms.

Menendez, Diane Susan. The effects of sentence-combining practice on remedial college students' syntactic maturity, punctuation skills and reading ability (Doctoral dissertation, Indiana University, 1978). Dissertation Abstracts International, 1978, 39/11-A, 6599.

The purpose of this study was to determine whether weekly sentence-combining activities, practiced as part of a one semester remedial college composition course, would influence students' language performance in three areas: writing performance as indicated by syntactic measures and holistic rating of writing quality; punctuation skills; and reading performance.

The study examined the work of 102 freshmen, selected on the basis of standardized test scores, who were assigned to one of three treatment conditions: 49 students were enrolled in two intact experimental classes which met three times weekly and practiced sentence-combining in addition to the regular curriculum; 26 students were enrolled in one intact control class which met three times weekly and received extra writing practice in addition to the regular

curriculum; and 27 students in control treatment were distributed among four regular composition classes meeting twice weekly and undergoing the regular composition curriculum. Pre- and post-treatment writing samples and punctuation tests were collected from all students; in addition, pre- and post-tests of reading comprehension and efficiency were administered to students in treatment conditions 1 and 2 (those meeting three times weekly). Using t-unit analysis procedures (Hunt, 1965), student writing was analyzed for six factors of syntactic maturity. Five composiiton teachers also assessed the quality of pre- and post-test writing by rating each essay holistically according to agreed-upon criteria. Differences in gains in mean scores for all treatment groups in syntactic, writing quality, punctuation and reading measures were registered on a one-way analysis of variance; difference in mean gain scores between treatments 1 and 2 were also compared by t-test. Judged by the analysis of variance and t-test on each factor, the experimental group gains were significantly different on only two measures of syntactic maturity, clauses per t-unit and adjective clauses per 100 t-units, and on one measure of punctuation error identification. The study found no significant difference in writing quality or reading performance of the groups before or after treatments. The results of this study suggest that sentence-combining methods and materials have limited

usefulness in providing a means for developing the written syntactic skills and punctuation skills of remedial college freshmen; the methods have no apparent effect on reading performance as measured by a standardized test of reading comprehension and efficiency, at least under the conditions of this study.

Miller, Michael Alan. A comparative study of two approaches to teaching freshman remedial composition in a comprehensive community college. Kansas City: University of Kansas, 1974. (ERIC Document Reproduction Service No. ED 108 222)

The purpose of this experiment was to determine if community college students enrolled in a freshmen remedial composition and reading course which stressed practical student skills and vocational skills relevant to their immediate needs could improve their reading and writing skills significantly more than comparable students whose remedial course did not include such materials. The subjects were 194 students who enrolled in the eight sections of English composition and reading taught in day school at Longview (Kansas) Community College in the fall semester, 1972. The experimental group consisted of 62 students. The first control group consisted of 46 students, and the second group consisted of 86 students. It was concluded that materials for vocabulary development were helpful in significantly improving scores on a vocabulary test, but this improvement did not carry over to comprehension and total reading scores. Students in the

experimental class scored significantly lower than students in the second control group on the theme grades which suggests that the experimental course should have included more time for work on the students' writing problems. Apparently, remedial students can improve both vocabulary and composition scores in one semester when those subjects are stressed.

Moore, Claude Smith. Differential effects of arithmetic and reading abilities, field dependence, and mathematics anxiety on problem solving achievement of developmental mathematics students in a community college (Doctoral dissertation, Virginia State University, 1980). Dissertation Abstracts International, 1980, 41/03-A, 974.

Differential effects of arithmetic and reading abilities, field-dependence, and mathematics anxiety on problem solving achievement of developmental mathematics students in a community college. 22 pages.

The purpose of this study was twofold. First, instructional materials and two criterion tests were developed and pilot tested. Second, an aptitude treatment interaction (ATI) study was conducted using four treatments to investigate differential effects of student aptitudes on problem solving achievement and post-anxiety.

Following Witkin's theory of field-dependence-independence two settings (Independent and Social) and two methods (Algorithmic and Heuristic) were created. Students worked through a set of programmed materials either individually or in small groups using audio-taped

instructions to facilitate interaction. The algorithmic method followed the Dahmus (1970) approach: the heuristic method patterned that of Polya (1957). According to the literature the other background variables of the study, mathematics achievement, reading ability, and mathematics anxiety have some clear interactive potential with instructional treatments particularly for developmental students.

The subjects for the study were the developmental mathematics students at Danville (VA) Community College during the fall quarter of 1978 (N = 133). Within each class, the students were randomly assigned to one of four treatments: A_I, A_S, H_I, and H_S. Pre-treatment aptitude measures were taken using four standardized tests. For two weeks students in A_I and A_S received the same algorithmically oriented instruction, differing only in the opportunities for social interaction. Those in H_I and H_S received the same heuristically oriented instruction, differing only in the opportunities for social interaction. In the last class meeting an achievement post-test was administered, half of which required application of general heuristics. In addition, a post-anxiety score was obtained and a Student Comments sheet was completed. Two weeks later, the students were given an achievement retention test.

Ninety-eight students completed the instruction and

took all the tests: 22 in A_I, 22 in A_S, 28 in H_I, and 26 in H_S. To test the ATI hypotheses, a general linear regression model was used, following the suggestions of Cronbach and Snow (1977). Post-test (total and heuristic scores), retention (total and heuristic scores), and mathematics anxiety (pre-anxiety as covariate) were the dependent measures used. The design variables (method and setting) were dummy coded and together with the aptitude measures and first order interactions were used in a multiple regression equation to predict each dependent variable. The general aptitude-setting interaction (ASI) was not significant for any of the dependent measures. The general aptitude-method interaction (AMI) was significant ($p < .05$) for the heuristic subscore on the post-test. On the retention test, however, there were no significant AMI's. The only significant main effects were associated with mathematics anxiety. Both method and setting were significant effects ($p < .01$) when pre-anxiety was a covariate.

Use of the Johnson-Neyman technique to analyze the significant AMI showed the heuristic method was shown to be superior for students who had higher reading ability, lower anxiety, or were more field-independent. Students at the other end of the aptitude scales tended to do equally well in the heuristic and algorithmic methods. Mathematics anxiety was significantly lower (when pre-anxiety was a

covariate) in the independent setting and in the algorithmic method.

The results of the study indicate that mathematical problem solving instruction for developmental mathematics students can be designed to take advantage of different student aptitudes. Namely, a heuristically oriented treatment will be more successful in training students to be general problem solvers than will an algorithmically oriented treatment if the students are well above the average of developmental students on the characteristics of reading ability, field-independence, and are well below the average in mathematics anxiety. Recommendations for instructional development of research were given based on the statistical analyses, student comments, and teacher observations.

O'Donnell, John Francis. An experimental study of the effects of the supplemental use of a psycho-linguistic remedial tutorial program on the reading and writing behaviors of high-risk college freshmen and on their attitudes toward reading, writing, and other college-related stimuli (Doctoral dissertation, Temple University, 1974). Dissertation Abstracts International, 1974, 35/03-A, 1552.

The purpose of this study was to investigate the effects of the supplemental use of a syntactically-oriented psycholinguistic tutorial remedial reading program (Reading by Patterns by Lefevre, Lefevre, and Shore) on the reading achievement, the syntactic maturity of written composition, and the attitudes toward selected college-related stimuli

of black high-risk college students. The following conclusions were given:

1. The experimental group was not, at the conclusion of the study, significantly different from the control group in reading achievement, in syntactic maturity in written composition, and in attitude toward college related stimuli.

2. The experimental group increased in reading achievement and in the syntactic maturity of written composition, and improved in attitudes toward selected college-related stimuli substantially more than the control group.

This seeming contradiction of Conclusion #1 appears to result from the fact that most of the control group means on the pre-tests were higher (not statistically significant) than those of the experimental group, but most of the experimental group means on the post-test were higher (again, not statistically significant). Thus, though multivariate analyses of post-test scores show no significant differences (Concluson #1), t-test for correlated means show significant increases on six of the fourteen variable measures for the experimental group and on only two for the control grourp.

The results of this study imply that the use of Reading by Patterns, a syntactically-oriented psycholinguistic remedial reading program, in tutorial sessions conducted by college upper-classmen untrained in the teaching of reading, may be an effective means of improving the reading achievement, the syntactic maturity of written composition, and the attitude toward college-related

stimuli of black high-risk college freshmen enrolled in a traditional remedial reading course.

O'Tuel, Frances S. Thursday's children. Improving College and University Teaching, Winter 1974, 22, 1, 23, 26.

Examines a remedial program at Palmer College, South Carolina. Tests selected for placement and post-testing (alternate forms) were the School and College Ability Test, Series II, Forms 1A and 1B, Cooperative English Test (1960), Forms A and B, and the Nelson-Denny Reading Test (1960), Forms A and B. Several correlations between scores on these tests were computed. A correlation of .78 was found between the SCAT II Verbal and the Cooperative English total score, and a correlation of .85 between the Nelson-Denny and the Reading Comprehension of the Cooperative English. In addition to testing the level of significance (F ratio) of the differences in the pre-basic instruction and post-basic instruction test scores, the administrators randomly selected on each campus a group of students who should have been placed in the remedial English course, but who were placed instead in the collegiate English class in a "double blind" situation. An F test was run on their scores also. Results of the research are as follows:

1. Gains of students in the remedial mathematics were significant at the .001 level.
2. Charleston campus basic English students made gains significant at the .01 level on the SCAT Verbal and Cooperative English Expression.

Columbia campus students' scores were not significant at .05 level.

3. Students who took basic English followed by the collegiate English course made gains significant at the .05 level on the Columbia campus on the Cooperative English Expression and on the Charleston campus on the SCAT II Verbal.

4. Students in the double blind situation (collegiate English course) did not have significant gains but on the Charleston campus where grades were obtained for these students, 19 out of 24 passed the course!

5. Students who took the basic reading made significant gains on the Nelson-Denny scores, .05 level for Columbia students, .01 level for Charleston students.

These results indicate that the program was successful based on significant differences in pre- and post-test results for students enrolled in the courses. Whether the gains are sufficient to warrant the cost, time, and effort is still a question, particularly in view of the successful completion of the collegiate English course by 19 out of 24.

Parham, Jo An Walton. Academic success of persistent and nonpersistent students voluntarily enrolled in a university reading program. Journal of Reading, May 1977, 20, 693-96.

Examines the academic success of persistent and non-persistent students voluntarily enrolled in a university reading program. Seventy university freshmen were classified as either persistent or non-persistent according to the number of hours they attended the university reading and study skills center.

Payne, D. B. The effects of participation in

college reading improvement program on retention of reading skills and academic achievement (Doctoral dissertation, Northwestern State University of Louisiana, 1971). Dissertation Abstracts International, 1971 (University Microfilms No. 71-16, 257)

Of 160 students who had enrolled in a reading improvement program, 26 were still registered after five semesters. Original size of the control group was not clear, but only seven remained. After five semesters, the experimental group had significantly higher overall GPA's even though they were taking more academic hours. No significant differences were noted in achievement in English, math, social science, or natural science.

Pepper, Roger S. The study skills and academic achievement of marginal admission students. In G. B. Schick and M. M. May (Eds.), Reading: Process and pedagogy. Nineteenth Yearbook of the National Reading Conference, 1971, 1, 248-53.

Examines the reading and study skills test scores of 155 marginal admission students before and after a training program and compares these scores with college grades.

Phillips, George O., Sr. Study habits and attitudes of disadvantaged students in a college reading and study skills program. In G. B. Schick and M. M. May (Eds.), Reading: Process and pedagogy. Nineteenth Yearbook of the National Reading Conference, 1971, 2, 152-57.

Attempts to determine the effect of different methods of reading and study skills instruction on the study habits and attitudes of 102 disadvantaged black college freshmen.

Phillips, George Oliver, Sr. The relative effectiveness of three instructional approaches upon the reading, study habits and attitudes, and academic performance of disadvantaged black

college freshmen. Reading World, October 1972, 12, 25-40.

Investigates the relative effectiveness of three approaches to teaching reading and study skills to 102 disadvantaged black college students.

Prichard, Allyn, and Taylor, Jean. Suggestopedia for the disadvantaged reader. Academic Therapy, September 1978, 14, 81-90.

Investigates the utility of an instructional method in raising reading scores for seventeen remedial readers, ages eight to eighteen. Students in the study were one year below grade level on the silent reading subtest of the Spache Diagnostic Reading Scales.

Rainwater, Jerry A. Comprehension characteristics of Chicano and non-Chicano students at Eastern New Mexico University. New Mexico: Eastern New Mexico University 1975. (ERIC Document Reproduction Service No. ED 108 183)

A study was undertaken to determine if differences existed between Chicano and non-Chicano students enrolled in the college reading improvement program and if Chicano students evidenced any comprehension characteristics unique to them as a group which would justify special instructional programming. Of the 184 subjects selected for the study, 69 were Chicano. The Davis Reading Test, Form 1A was used; it is an instrument which measures five types of comprehension, three of which--factual recall, main idea, and inference--were selected for measurement in this study. Results of the study showed that there are significant differences in reading comprehension between the two

groups. Data showed no differences between Chicanos and non-Chicanos who were good readers. It was concluded that this difference was caused by inferential comprehension.

Raisner, Barbara. Adult reading strategies: do they differ from the strategies of children? Reading World, October 1978, 18, 37-47.

Investigates miscues made by fourteen college students designated non-proficient readers on the basis of a standardized test. Findings were compared to those in studies conducted with children. In general, the findings support the psycholinguistic view that reading is an interaction between thought and language rather than merely a precise perception of printed words. The most proficient readers in the sample were those who were most efficient in their use of the available cues in the grammar (syntactic) and in the context (semantic), as well as in the graphic display. They were not necessarily the readers who made the fewest miscues, but rather those whose miscues were least likely to cause a loss of meaning. Table summarizing miscue data and compilation of miscue data for all subjects included.

Rakes, Thomas A.; Lintz, Elizabeth; and Payton, Lucretia. An evaluation of the reading achievement of disadvantaged freshmen enrolled in competency-based and traditional college reading improvement classes. In Phil L. Nacke (Ed.), Interaction: research and practice for college-adult reading. Twenty-Third Yearbook of the National Reading Conference, 280-84.

Compares attitudes and pre-test/post-test reading achievement of students in two competency-based and two

traditional college reading courses. Subjects were sixty-one high-risk economically deprived, predominantly black, work-study students.

Ratekin, Ned. The effect of two different reading programs on culturally disadvantaged college freshmen. Atlantic City, N.J.: Paper presented at the meeting of the International Reading Association, April 19-23, 1971. (ERIC Document Reproduction Service No. ED 053 867)

The effects of a 10-week program in reading skills instruction or study skills instruction on culturally disadvantaged college freshmen in improving reading and academic performance were studied to identify the optimum programs for particular students. Subjects were 60 entering freshmen scoring at or below the 30th percentile on the Iowa Silent Reading Test and 60 control subjects. Three criteria--grade point average (GPA), difference between expected and actual GPA, a reading test residual gain score--were used to examine several null hypotheses. It was concluded that (1) there was a significant difference between the instructional and control groups on all three variables; (2) according to GPA analysis, achievement favored the rural students; (3) there was no difference in the effectiveness of the two modes of instruction; (4) however, some difference of effectiveness may have been hidden by grouping students of different backgrounds; (5) reading instruction appeared to be more helpful for urban students and study skills for rural; (6) study skills should follow reading skills for urban

students. Tables and references included.

Reese, Thelma Terdiman. Effectiveness of a college reading program (Doctoral dissertation, Temple University, 1976). (University Microfilms No. 73-29, 395)

This study evaluated the reading component of a compensatory education program to aid college students whose skills are not sufficient to meet the demand of required English and other courses in the basic studies curriculum. The reading course is required for students who score below 550 on the SAT verbal subtest and who score poorly on the comprehension subtest of the cooperative English Tests. The subjects were 154 freshmen and 88 transfer students, who took the reading class in the fall of 1974. The course met three times a week during the semester and utilized two college reading texts, the students' content-area tests, and teacher prepared materials. At the end of the semester, post-testing indicated that all students made significant gains in comprehension. For comparison of grade point averages (GPA), randomly selected records of 154 regular students were analyzed. The mean GPA's of the special freshmen, special transfers, and regular freshmen were 2.3, 2.4, and 2.6, respectively.

Reinertson, Jacquelyn. The problems of literacy in the community college. Charles Stewart Mott Community College, 1978. (ERIC Document Reproduction Service No. ED 156 286)

The instructional reading levels of students enrolled

at Charles Stewart Mott Community College, a large urban institution with an open door policy, were investigated for 1971-1972 through 1977-1978. The study was based on the hypothesis that mean average reading levels in reading improvement classes declined over those years. All students entering the college took reading placement tests and after seeing their scores, could elect remedial courses; in spring 1972, 4.75 percent and in fall 1977, 5.39 percent of the students elected to take reading. The reading scores of all entering students for the study period were compared, the improvement of remedial students was noted, and comparisons with national norms were made. The mean of the approximate grade-level reading scores for the college's remedial students were 10.7 in 1972 and 9.9 in 1977. Students gained approximately two years overall above their entering scores as a result of participation in the sixteen-week remedial course; the mean gain was 2.17 years in 1972 and 1.96 in 1977. Generally, students reading at college level when entering the college, who elected to take reading, nearly doubled their reading speed and improved their vocabulary and comprehension scores substantially. The college findings seemed to agree with national trends.

Rice, Donald H. A study to determine the effectiveness of a developmental reading program in a community college setting (Doctoral dissertation, East Texas State University, 1971). Dissertation Abstracts International, 1971, 32/10-A, 5573.

The purpose of this study was to determine whether there is a significant difference between reading effectiveness of the students enrolled in the developmental reading classes of Grayson County College in the Liberal Arts, Fine Arts, Engineering-Science Divisions, Group A, and that of those in the Technical-Vocational and Business Divisions, Group B, as measured by a pre-test versus post-test on the Nelson-Denny Reading Test, interacting with the variables of age, sex, IQ, and a composite of these.

The statistical procedures utilized to test the significance of the null hypotheses produced the following findings:

1. There was no significant difference when the students in Group A were compared to students in Group B in the first two age sub-groupings in reading vocabulary, reading compehension, reading vocbulary and comprehension composite, and reading rate. However, there was a significant difference when the students in Group A were compared to the students in Group B in the third age sub-grouping in reading comprehension and reading vocabulary and comprehension composite scores. There was no significant difference in reading vocabulary and reading rate in this sub-group.

2. There was no significant difference when the students in Group A were compared to students in Group B in the sex sub-groupings of males in reading vocabulary, reading comprehension, and reading rate. However, there was a significant difference when the students in Group A were compared to students in Group B in the sex sub-groupings of males in reading vocabulary and comprehension composite scores. There was no significant difference when the students in Group A were compared to students in Group B in the sex sub-groupings of females in reading comprehension and reading rate.

3. There was no significant difference when the students in Group A were compared to students in Group B in the four IQ groupings in reading vocabulary, reading comprehension, vocabulary and comprehension composite scores, and reading.

4. There was no significant difference when the student's total composite of age, sex, and IQ of Group A were compared to the student's total composite of age, sex, and IQ of Group B on vocabulary, compehension, vocabulary and comprehension composite scores, and reading rate.

Conclusions: On the basis of the various findings made by this study, the following conclusions were drawn:

1. The greatest gain made in reading during the time of this study was in the area of reading rate. The next highest gain was in reading vocabulary and the poorest gain was made in reading comprehension.

2. In all but one instance the mean scores did show a gain from the pre-testing to the post-testing of Group A and Group B. This one decline in the mean score was a -1.57142 in Group B Ages (18 years of age) on comprehension.

3. Sub-group three (ages 25 through 54) did show a significant difference at the .05 level of confidence in ages on comprehension and ages on reading vocabulary and comprehension composite scores.

4. Group A and Group B females sex groupings did show a significant difference at the .05 level of confidence on reading comprehension and reading rate.

5. Group A and Group B male sex groupings did show a significant difference at the .05 level of confidence on reading vocabulary and comprehension composite scores.

6. Group A and Group B were not significantly different at the .05 level of confidence in reading vocabulary, reading comprehension, reading vocabulary and comprehension composite and reading rate scores other than those listed above.

Robertson, Eileen Marie Hanley. The effects of different rates of recorded speech on the listening comprehension of adult remedial readers. Georgia: University of Georgia, 1977. (ERIC Document Reproduction Service No. ED 155 681)

The purpose of this study was to investigate the differences in average mean levels of listening comprehension of adult remedial readers presented with verbal instructional materials written at a 6.5 reading level and recorded at speech rates of 60, 120, 180, and 240 wpm. The study sample consisted of 231 adults enrolled in 34 Communication Skills I classes at seven of Georgia's 29 Area Vocational-Technical schools. All but one school was randomly selected. The research design was a four by seven (4x7) treatments-by-levels design in which there were four speech-rate variables and seven reading-level variables. The vocabulary portion of the California Achievement Test, Form W (1957), was the instrument employed to categorize subjects according to seven grade levels of reading ability: under 3.0-3.9, 4.0-4.9, 5.0-5.9, 6.0-6.9, 7.0-7.9, 8.0-8.9. Each subject was randomly assigned to listen to one of four speech rates of identical factual material prepared by the researcher about the pricing codes of retail merchants. The reading grade level of the listening selection was 6.5 as measured by the average of three readability formulas--Dale-Chall, Flesch, and Gunning. Judges and two pilot studies were utilized to verify the three achievement tests constructed to measure

Knowledge, Comprehension, and Application according to Bloom's (1969) Taxonomy, with each test containing ten multiple-choice items, or a total of 30 items. While seated in individual carrels, the subjects wore headphones and listened to a continuous tape consisting of the instructions, factual passage, and test items. There were three types of statistical analysis used to test the data: multivariate analysis of variance (MANOVA), univariate analysis (ANOVA), Scheffe test of multiple comparison. The MANOVA and ANOVA tested at the .05 level of significance and the Scheffe at the .10 level. On the basis of the data gathered and analyzed from this population, the following conclusions are warranted: (1) There is no optimum speech rate manifested for the subjects as a whole or for subjects segregated according to reading ability. (2) When subjects are presented with recorded verbal instructional material of identical content, there is no indication that the slower expanded rates of 60 and 120 wpm result in significantly greater listening comprehension. (3) Listening comprehension and reading ability appear to be related verbal skills. Listening comprehension tends to vary directly with the level of reading ability. (4) The poorest readers exhibit the poorest listening comprehension; better readers are also the better listeners, as measured by scores on tests of listening comprehension. (5) The listening comprehension of subjects

does not seem to be affected when they are presented recorded instructional materials written two reading grades below or three grade levels above their own particular reading level.

Ross, Beth Pendleton. A study of the effectiveness of the reading 104 developmental class at Metropolitan State College (Doctoral dissertation, University of Colorado at Boulder, (1980). Dissertation Abstracts International, 1980, 41/08-A, 3510.

This study was designed to determine if there was a relationship between having taken Reading 104 and (a) longevity in college and (b) changed grade point average. A secondary purpose was to determine if there was a difference between students who completed Reading 104 and those who did not in perceived importance of the reading behavior and concepts taught in the class and reported frequency of use of concepts included in the Reading 104 syllabus.

Statistical analyses using the SPSS computer program and LERTAP item analyses were performed to determine if participation in a Reading 104 class increased longevity in college, if participation in a Reading 104 class was associated with gains in grade point average, and if taking Reading 104 was associated with increased use of the concepts and behaviors taught in the class and with perception of the importance of these concepts and behaviors.

No significant differences in longevity were found between the experimental and control groups for the four terms following Reading 104. There were also no signifi-

cant differences between the experimental and control groups with respect to grade point average after taking Reading 104. The survey instrument examining the perceived importance of the reading behaviors and concepts taught in the class and the reported frequency of use of these behaviors and concepts, showed no significant differences between the experimental and control groups.

Even though the statistical analyses showed that there were no significant differences between those who had taken Reading 104 and those who had not, other implications did surface during the analyses. Interactions showed that males in the experimental group appeared to make greater gains in reading behaviors after taking the course. This further suggested that males have a generally greater need for this kind of reading improvement class than females.

The lack of significant differences between the experimental and control groups also indicated that through a selection process, that of just staying in school, the experimental and control groups had become approximately equal with respect to reading behaviors.

The changing of attitudes toward reading behaviors and concepts, which in turn may change the reading behaviors themselves appeared to be a benefit of the class.

Interactions detected in the study suggested that Reading 104 may have been more effective for certain subgroups. Further studies examining these subgroups and

their gains are recommended.

Ross, Sandra F. A study to determine the effect of peer tutoring on the reading efficiency and self concept of disadvantaged community college freshmen: Final report. Fort Worth, Texas: Tarrant County Junior College, South Campus, 1972. (ERIC Document Reproduction No. ED 081 45)

This research was conducted within a one-year compensatory or basic studies program for college freshmen at Tarrant County Junior College, South Campus, Fort Worth, Texas. Students enrolled in the same reading course served as tutors and tutees in the classroom. The peer tutors were second-semester students and the tutees were first-semester students. Weekly in-service training meetings were conducted for the tutors who were paid to attend in addition to being paid for two hours per week of tutoring. All groups made gains in reading as well as self-concept. The greatest gains were made by the spring tutors who had been tutees and by their tutees who had the advantage of the "experienced" tutors. Over a period of two semesters the tutees-who-became-tutors gained 34 percentiles on the Sequential Test of Educational Progress--Reading and 15 points on the Tennessee Self-Concept Scale. Students made better reading and self-concept gains in the role of teacher than in the role of student. Students receiving instruction from experienced tutors made slightly better gains than students paired with inexperienced tutors.

Ruppel, George. A self-managed reading improvement program. Notre Dame, Indiana: Paper presented at the Annual Meeting of the North

Central Reading Association, October 20-21, 1978. (ERIC Document Reproduction Service No. ED 013 371)

In an investigation of the effectiveness of self-managed reading improvement programs, a program incorporating self-monitoring (observing and recording relevant activity), self-reinforcement (increasing the probability of some target behavior by the self-presentation of positive consequences or the removal of negative consequences), and shaping (setting intermediate goals and emphasizing gradual improvement) was administered to 204 undergraduate study skills students. There were two self-reinforcement conditions (performance and improvement contingent), a monitoring control condition, and a no treatment control group. The treatment lengths were six weeks and eight weeks. Analysis of pretest and posttest results indicated that the performance contingent self-reinforcement group showed an average reading rate increase of 355 and that students in all three experimental conditions showed significant improvement in reading rate over those in the control group. Comprehension was unaffected. There were no differences between males and females or between treatment lengths. The results seem to emphasize the importance of programs of reading improvement and to highlight differences in self-reinforcement strategies.

Ryan, Douglas Thomas. A comparison of scores of first year college students between the Arrow Group Test and selected academic, reading, and intellectual variables. Mississippi: University

of Southern Mississippi, 1977. (ERIC Document Reproduction Service No. ED 159 652)

The purpose of this study was to determine if there is a relationship between comprehending and visualizing the sentence specifics of quantity, direction, and sequence of events in a given sentence by readers of varied reading achievement. Visual imagery was diminished as an area of psychological inquiry by Watson and his behaviorist followers in the 1900's. Rejuvenated interest by contemporary researchers has shown visual imagery to have value as a learning and memory mediator. A sample (N = 95) was drawn from two introductory psychology courses (N = 150) which were held during the spring quarter, 1977, at the University of Southern Mississippi (USM). Three tests were administered to the study-subjects: the Otis Quick Scoring Mental Abilities Test (Otis IQ), the Nelson-Denny Reading Test (DRT), and the specially constructed Arrow Group Test (AGT). The AGT consists of 25 sentences with 25 matching sets of arrow groups which symbolically represent the sentence theme(s) including quantity, direction, and sequence of events. In addition to the tests administered, part of the study-subjects' (N = 79) American College Test (ACT) scores were made available by the students and acquired from the University of Southern Mississippi Admissions Office. These scores were used as variables in the regression predictor equation. Because the Arrow Group Test was a new instrument, a pilot study was instituted to

verify directions for administration of the AGT and sentence wording and also to determine the most effective slide exposure time of the arrow groups. This small study was done at the USM Reading Center. Subjects (N = 19) were volunteers from junior-level reading classes which were being held during the First Quarter of 1976. Hypotheses generated in the study proper purported to find a significant relationship between the independent variables of intelligence (Otis IQ), reading achievement (NDRTO), general academic achievement (ACT), sex, and the criterion variable, AGT. The data were analyzed by a posited stepwise regression equation that would reveal the relative amounts of accountable variance contributed to the equation by the independent predictor variables with the AGT as criterion variable. Intelligence (Otis IQ = .41) in the full regression model was revealed as the best prediction variable of the AGT under the circumstances of the study. English--ACT (R = .42), NDRT (R = .47), sex (R = .49), natural science--ACT (R = .53), and mathematics--ACT (R = .52) were the remaining predictors as they added significant variance to the AGT. The simple relationships existing between the AGT and reading (NDRT) were vocabulary (r = .331), comprehension (r = .229), rate (r = .009), and total (r = .353).

Santa, Carol M., and Truscott, Robert Blake. A college reading program: The integration of reading, writing, speaking, and thinking within the content areas. College Student Journal, Winter

1979, 13, 391-97.

Describes and presents evaluation data on a college reading and study-skills course designed for freshmen scoring below the thirty-fifth percentile on the McGraw-Hill Reading Test. The course met three hours a week for one semester.

Santeusanio, Richard P. Matching college reading instruction with student characteristics. Bethesda, Maryland: Suffolk University, 1974. (ERIC Document Reproduction Service No. ED 099 824)

The major purpose of this study was to relate individual differences among selected Suffolk University freshmen to their ability to succeed academically through a reading study skills course which utilized a teacher-directed and a student-directed approach. The subjects were 87 students from a freshman class who had graduated in the bottom 60th percent of their high school class. The students were randomly assigned to three groups: (1) a noncredit, student-directed skills class, (2) a noncredit teacher-directed skills class, and (3) a control group receiving no training in reading study skills. There were two sections of each teaching approach, both sections taught by the investigator. Fifty-minute classes were held a week for 15 weeks. Students in both the experimental and control groups carried between 12 and 15 academic credit hours. An examination of the resultant tables shows that if alternative instructional treatments are provided for

students with different characteristics, a greater proportion of students required to enroll in Suffolk University's College Reading-Study Skills program should make scholastic improvement.

Sheridan, Marcia E. Meeting the reading and study skills needs of nontraditional college students for the 80's. South Bend, Indiana: Indiana University-South Bend, 1979. (ERIC Document Reproduction Service No. ED 188 133)

A series of studies was conducted to determine the reading and study skills needs of nontraditional students in the Indiana University-South Bend open enrollment program. An investigation of reading level conducted with 61 students in introductory English classes determined that 20 percent were at the remedial level in reading and more than 44 percent were at that level in study skills: in addition, 6.5 percent were below the 7.9 grade equivalent in reading and 4.8 percent were below that level in study skills. Another study determined that the average reading level of GED tests was grade 10 and that they required little in analytical reading and thinking skills. College textbooks in various subjects were tested for readability level, and the mean level was grade 12.8. Recommendations for recruiting nontraditional students include the following: administer a battery of tests on admission to identify those students remedial in basic skills so that they may be properly advised, offer courses in remedial reading and study skills, and establish a minimal level of

competency for admission to the university, as well as criterion level for referral to remedial reading.

> Simpson, Sharyn Orlowski. The relationship of organizational factors to the remedial techniques used in college and university reading clinics and centers (Doctoral dissertation, University of Wyoming, 1975). Dissertation Abstracts International, 1975, 36/07-A, 4246.

A questionnaire developed for this study solicited responses from 126 college and university reading clinics concerning their organizational make-up and the remedial techniques they used with clients. Eleven organizational factors were then paired with each of fifteen remedial techniques and analyzed through one-way analysis of variance and Scheffe test of multiple comparisons where necessary. At the $p = .05$ level, significant relationships were found between specific remedial techniques and: clinic size, number of hours given to remediation daily, number of hours given to one-to-one instruction weekly, payment for some services teacher-to-student ratio, use of self-developed continua, use of reading continua and stated goals of remediation.

The conclusions reached were limited by unequal cell frequencies in many cases; however, organizational factors were found to have relationships to the use of certain remedial techniques, especially the use of basal readers and the teaching of the supportive skills of visual and auditory perception and motor development. Variables least related were use of the language-experience approach and

Fernald VAKT.

Solomon, Barton, and Others. A quantitative and qualitative analysis. Staten Island: City University of New York, 1972. (ERIC Document Reproduction Service No. ED 075 024)

The College Discovery program at Staten Island Community College implemented a summer program in 1972 for entering freshmen diagnosed, by means of a placement test battery, as needing remedial work in English and math. The goal of the project was to bring these students up to college-level proficiency. Participants re-took the test battery at the end of the summer and filled out a brief questionnaire assessing their views of the program. Participants were counseled during the program individually and in groups. A stipend covering transportation and lunch was given to each student. Students submitted ongoing evaluations of their work and attitudes, teachers submitted weekly evaluations, and grades were based on attendance to encourage a more relaxed atmosphere. At the end of the program, each student received a comprehensive oral and written evaluation from each member of the faculty. More than half the participants demonstrated that they were capable of doing regular rather than remedial work at the end of the program. Others had considerably improved, though remedial work was still needed. Motivation was high, students enjoyed the program, and the group sessions and informality helped to "demystify" the educational process. It is recommended that the program be lengthened

from four to six weeks, that enrollment be increased, that the program be mandatory for remedial students, and that the curriculum be expanded.

Staley, Nancy K., and Smyth, Thomas J. C. An evaluation of the effectiveness of a college reading program using four criteria. In Michael L. Kamil and Alden J. Moe (Eds.), Reading research: Studies and applications. Twenty-Eighth Yearbook of the National Reading Conference. Clemson, S.C.: Clemson University, 1979, 182-85.

Evaluates the effectiveness of a college reading program. Subjects were 148 experimentals who took a developmental reading course and fifty-three controls who did not take the class.

Streichler, Rosalind. Competencies for teachers of college developmental and remedial reading in two year post secondary institutions (Doctoral dissertation, Bowling Green State University, 1980). Dissertation Abstracts International, 1980, 41/07-A, 2904.

The purpose of this study was to determine the importance of selected knowledge, behavior, and performance competencies needed by teachers of college developmental and remedial reading in two-year post-secondary institutions as perceived by college reading educators in Ohio's public two-year post-secondary institutions.

Procedural efforts involved the identification of appropriate competencies stated and/or implied in the literature, validation of the competency list by a selected jury, and determination of the importance of these competencies by practitioners in the field, college reading

educators in two-year public post-secondary institutions in Ohio.

Questionnaires sent to this group of college reading educators resulted in a return of 74 (78.7 percent) usable responses. Seventy-nine competencies needed by college developmental and remedial reading teachers in two-year post-secondary institutions were rated according to importance in a five-point Likert-type scale. Competencies required in the following areas were identified: (1) Basic Reading Foundations. (2) Orientation to Two-Year Post Secondary Institutions. (3) Interpersonal Relationships--Attitudes. (4) Foundations of Reading Instruction. (5) General Instructional Skills to Facilitate Instruction, and (6) Professional and Personal Development.

Results of this study indicated that strong skills in interpersonal relationships, positive attitudes and behaviors, and knowledge and techniques for teaching certain specific reading skills were generally more highly regarded than general pedagogical skills and skills related to professional and personal development.

This study provides teacher educators, administrators, and teachers of college reading with a list of competencies derived from the literature validated by jury, and ranked according to importance by college reading educators.

The outcome of this study, a list of competencies for college developmental and remedial reading teachers in

two-year post-secondary institutions may be used (1) to provide the basis for preservice and inservice training programs, (2) as an aid in recruitment of effective teachers, and (3) as a guideline for establishing competency requirements in related disciplines.

Swalm, James, and Cox, Gordon. A content approach to reading skill development for special admit freshmen in a four year college. In Frank P. Greene (Ed.), College reading: Problems and programs of junior and senior colleges. Twenty-First Yearbook of the National Reading Conference, 1972, 42-49.

Evaluates a reading program designed to meet the needs and interests of fifty-six special admit college freshmen.

Swindling, James A. Credibility through accountability in a community college reading program. Dallas, Texas: Annual Conference of the Western College Reading Association, April 9-12, 1982. (ERIC Document Reproduction Service No. ED 201 372)

This study was conducted at Eastfield College, Texas, to assess the impact of remedial reading instruction on the academic achievement of students with reading skill deficiencies. The study involved all students whose basic skills were assessed at Eastfield College and who received academic advisement between April 1978 and August 1978 (n = 898). Of the students, 66 percent (n = 586) scored above 9.2 on the Nelson-Denny Reading Test. Of the 313 students who scored below 9.0 on the test, 33 percent enrolled in a developmental reading course and 45 percent did not. Students' records were subsequently monitored for two years to identify significant differences between groups in terms

of average hours attempted, average hours completed, attrition, and grade point average (GPA). The study revealed that: (1) the students reading at a 9.2 grade reading level attempted an average of 9.2 hours per semester, completed an average of 5.7 hours per semester, completed an average of 3.3 hours, persisted at a rate of 58 percent, and had a GPA of 2.6. Implications of the findings for institutional accountability are discussed in the study report.

Taylor, John F., and Graham, John R. A simplified MMPI form with reduced reading difficulty level. Journal of Clinical Psychology, April 1974, 30, 182-85.

Reports a study in which sixty-eight college students were used to validate a form of the MMPI for use with subjects of low reading ability.

Thomas, Leonard Edward. Listening as an adjunct to remedial reading at the junior-community college level (Doctoral dissertation, North Carolina State University at Raleigh, 1974). Dissertation Abstracts International, 1974, 36/03-A, 1246.

This study was made to determine if junior-community college students with reading problems were able to improve their reading comprehension more effectively with a dual-modal (concurrent auditory and visual) presentation than a unimodal (visual or auditory separately) presentation. This experimental research project was conducted with junior-community college students enrolled at Mount Royal College in Calgary, Alberta, Canada.

All were enrolled in the institution's traditional

remedial reading program. The original experiment was performed in 1970, with replications in 1971, 1972, and 1973.

The experimental group for each year consisted of 120 freshmen students. They were divided into four reading levels by pretest scores and 30 students were randomly chosen to form the experimental sample for each reading level. By random process, each reading level was further divided into three treatment groups--10 to reading only, 10 to listening only, and 10 to a combined reading and listening mode.

The experimental material was taken from the Reading for Understanding program developed by Scientific Research Associates. The criterion score was the number of levels the subject was able to complete at the 90 percent comprehension level during the testing period.

An analysis of variance procedure with a 3x4 factorial design was used in analyzing the data. The treatment effect, the block effect, and the interaction effect were all significant at the .01 level.

The dual-modal presentation was more effective than the unimodal presentations; and listening was more effective than reading. The block effect indicated the reading level was significant and the interaction effect suggested that the lower the reading level, the more effective was the dual-modal presentation.

Further research was recommended to determine the upper limits of the reading and listening presentations, and the time required in a dual-modal presentation for the subject to switch modalities. A similar experiment was recommended to determine the effectiveness of each of the presentation modes on retention rather than immediate recall.

Recommendations derived from the study indicated a dual-modal presentation should be used in the teaching process, libraries should consider purchases in the auditory mode, and new vocabulary or subject-matter concepts, as well as remedial reading instruction, should be presented in the dual-modal format.

Thompson, Mark E. Helping the high risk student in higher education: A description of research studies reporting success utilizing study skills/ remedial programs. December 1976. (ERIC Document Reproduction Service No. 138 845)

High risk students in higher education are identified as being marginally qualified to enter and persist. These students are handicapped with low high school grades, poor study habits, low aptitude scores and little ambition to meet academic requirements. Although the process of reversing fixed behavioral patterns is most difficult, several research studies have reported success with study skills/remedial treatments. This article reports on research conducted with high risk students by applying a pre-college treatment or conducting special courses during

the academic semester. The data indicates that high risk students can improve upon their predicted grade point average when a study skills/remedial treatment is employed.

Tillman, Chester E. Four-year college reading improvement programs and grades: an annotated review, 1945-1971. Journal of Reading Behavior, Spring 1973, 100-09.

Annotates thirty-one studies evaluating four-year college reading programs.

Tillman, Chester E. Measuring outcomes in college reading programs. In Frank P. Greene (Ed.), College reading: Problems and programs of junior and senior colleges. Twenty-First Yearbook of the National Reading Conference, 1972, 2, 205-212.

Reviews studies utilizing a variety of criteria to measure outcomes of college reading programs.

Turner, Caroline S. The effect of a developmental program on university grades. Journal of Reading, April 1974, 17, 531-37.

Evaluates the learning Development Program established at Kent State University to assist students in the areas of study skills, reading, counseling, and tutoring at Kent State University, 1971. QPA (Quarterly Point Average) was used as an index to measure gain or decrease of academic performance. Participant group--379 students, students were not treated as a homogeneous group; 379 students (random sample) made up the nonparticipant group. The participant group members were evaluated in problem areas: reading, study skills, and counseling. As a result of an analysis of variance, Newman-Keuls comparisons, and a

dependent *t* test, several significant mean QPA differences were found for the participant group while no significant differences were found for the nonparticipant group. The study suggests that student participation in a developmental program which consists of more than one developmental component is beneficial. The combination of offering reading, study skills, counseling, and tutoring based on an individualized evaluation of the student's problem is apparently influential in raising mean QPA both immediately and over a period of time. The main thrusts of a developmental program were seen by the staff to be: (a) assisting a student in the development of necessary academic skills and (b) developing attitudes which would enable the student to use these skills independently.

> Weiskopf, William J. Impact of congruence and incongruence of field dependent and field independent interaction upon high risk students enrolled in remedial developmental courses at the community college level (Doctoral dissertation, Florida State University, 1980). Dissertation Abstracts International, 1981, 41/07, 2905.

This study had two purposes: (1) to describe the frequency of occurrence of the cognitive style of field dependence among "high risk" students in developmental courses at the community college level, and (2) to describe the natural impact of match/mismatch of instructor and student cognitive styles upon certain educational outcomes, such as interpersonal attraction, course completion, student personal development and academic persistence.

Speculation by Cross (1976) and Martens (1978) that the field dependent dimensions of cognitive style may be a learning difference that is of critical importance to this student population prompted this study. Review of the literature reflected the importance of conceptualizing learning as a social process in which the influence of the instructor upon student is particularly important for this student's mode of information processing.

A total sample of 483 students and 27 instructors from six community college campuses in West Central Florida participated. Of the student sample, 379 or 78.5 percent classified themselves as "high risk" students by reporting high school grades averaging below a B; 89 or 18.4 percent were classified as low risk; and 15 or 31 percent could not be classified.

The Group Embedded Figures Test was used to determine the cognitive styles of student and instructor samples. Results of the two population samples indicated that approximately 80 percent of the students were field dependent while only 20 percent of their instructors were so classified.

Results of the first part of the study showed that the cognitive style of field dependence occurred significantly ($p = 000$) more frequently in the high risk than in the thirty minute tape-recorded samples of their instruction. A still experimental instrument, Herold's Teaching Strate-

gies Observation Instrument, suggested that this sample of instructors had teaching styles similar to their measured cognitive style. Further analysis of course completion/non-completion of field dependent students by instructor suggested that instructors with field dependent and mixed-adaptive teaching styles tended to show better student completion rates than those with field independent teaching styles.

Conclusions are presented in the areas of frequency of occurrence of field dependence, of the match/mismatch effect upon student outcomes, and of the low risk student sample and that field dependence for this sample was a better indicator of student course noncompletion for high risk students than the criterion of reported high school grades.

Student reactions to matched/mismatched instruction were assessed by the Byrne Interpersonal Attraction Scale and a student follow-up survey. Results of this part of the study indicate the match/mismatch effect naturally found in the classrooms of this sample was significantly related to interpersonal attraction, course completion and student personal development, but not to persistence into the next academic term.

An allied study of the actual teaching style of the instructor sample was made based on ratings of relationship between cognitive and instructional styles. The study

confirms the speculation that field dependent learners are overrepresented in the developmental student population. Indeed, virtually eight out of ten of these students were field dependent. Because field dependence and student-instructor mismatch were significantly associated with student course noncompletion, the study supports Cross' hypothesis that present educational practices may be geared more to the style of field independent learners, to the disadvantage of the field dependent learners. Further confirmation of this bias was tentatively supported by the tendency of field dependent learners to have lower completion rates with instructors having a field independent teaching style than with instructors having field dependent and adaptive teaching styles. Implications and recommendations for instruction, counseling and institutional planning are presented.

Whitt, Mary Frances. Reading Comprehension: An analysis for developmental reading programs in institutions of higher education (Doctoral dissertation, University of Alabama, 1980). Dissertation Abstracts International, 1980, 42/04-A, 1431.

The purpose of this study was to analyze the skill of comprehension within a developmental reading program and to determine if reading comprehension showed significant gains when a developmental reading course emphasized the skill of comprehension. Three reading skill areas were analyzed.

The population of this study included entering freshmen students at Alabama State University who were admini-

stered the Nelson-Denny Reading Test and enrolled in the developmental reading program. Participating freshmen students comprised 14 class sections of developmental reading and formed the experimental and control groups for the study. The experimental group was composed of seven sections of developmental reading with a total of 102 students. This group received instruction based upon a comprehension emphasis approach. The control group consisted of seven sections of developmental reading with a total of 102 students. This group received instruction based upon a skills approach with no emphasis upon a particular skill.

Three null hypotheses were formulated to determine the variability of test scores on the Nelson-Denny Reading Test for differences in total reading vocabulary, and comprehension between experimental and control groups. The determination to accept or reject three null hypotheses of the study was based upon an analysis of variance on the pretest and posttest data obtained from reading scores on the Nelson-Denny Reading Test. The p .05 level of significance was used as the acceptable level of probability for the statistical procedure.

The data is reported in three parts each dealing with that which was computed for the particular null hypothesis being tested.

The three null hypotheses were the following: (1) No

significant differences in total reading gain, as indicated by the Nelson-Denny Reading Test data will be found between those students who received comprehension emphasis instruction (experimental group) and those students who did not receive comprehension emphasis instruction (control group). (2) No significant differences in vocabulary gain as indicated by the Nelson-Denny Reading Test data will be found between those students who received comprehension emphasis instruction (experimental group) and those students who did not receive comprehension emphasis instruction (control group). (3) No significant differences in comprehension gain, as indicated by the Nelson-Denny Reading Test data, will be found between those students who received comprehension emphasis instruction (experimental group) and those students who did not receive comprehension emphasis instruction (control group).

A summary of the statistical analysis of the first null hypothesis revealed that there was a significant difference between the two groups. The first null hypothesis was rejected. An analysis of the second null hypothesis found no significant difference between the two groups. The second null hypothesis was accepted. The third null hypothesis was rejected when a significant difference was found between the groups.

The following conclusions were based upon the findings. (1) An analysis of the data and presentation of the

findings revealed that in total reading the experiment and control groups made significant gains. This improvement in the reading skills by both groups was probaby due to three variables, student interest in the developmental reading course, academic ability, and the instructional process. (2) Both groups made significant improvement in the vocabulary skill. (3) The experimental group made significantly greater gains than the control group in the skill of comprehension which was the major focus of this study.

Although the initial comprehension scores were lower for the experimental group, higher scores and greater gains were made by the experimental group. It may be concluded that a comprehension emphasis procedure could improve all the reading skills and, more specifically, the skill of comprehension, to a much greater extent.

Wolfe, Rosemary Fanti. An examination of teaching a reading vocabulary upon writing vocabulary in student compositions. Maryland: University of Maryland, 1975. (ERIC Document Reproduction Service No. ED 114 818)

The effects of two methods of teaching a reading vocabulary on writing vocabulary in student compositions were investigated; the teaching of a specific reading vocabulary with students' practice of words in multiple-choice exercises. The retention of students' writing vocabulary after the vocabulary program had been completed was also examined. The subjects were 75 community college freshmen who were required to enroll in a remedial reading

course. While the experimental group participated in one of the two vocabulary programs, the control group received no directed instruction in vocabulary. All students wrote three pre-treatment themes, three post-treatment themes, and three delayed themes six weeks after the program had been completed. From the results, it was concluded that the teaching of a specific reading vocabulary can have a facilitative effect on the use of different words in student compositions. In addition, the teaching of a specific reading vocabulary with practice of words in sentences can have an effect on the retention of the use of difficult words in student compositions.

Wright, Gary Lee. An experimental study comparing the differential effectiveness of three developmental reading treatments upon the rate, vocabulary, and comprehension skills of white and black college students (Doctoral dissertation, Southern Illinois University at Carbondale, 1973). Dissertation Abstracts International, 1973, 34/09-A, 5811.

The major purpose of this study was to investigate the relative effectiveness of three instructional reading treatments upon the reading skill development of disadvantaged Black college students as compared to white college students. Effects of the different instructional reading treatments were measured by each student's ability to improve his reading skills in the areas of reading rate, vocabulary, comprehension and total reading as measured by the Diagnostic Reading Test, Survey Section.

An analysis of the statistical findings indicated:

(1) There was an ordinal interaction between race and treatment effecting the criterion vocabulary scores.

(2) There was no significant statistical differences between the two races on rate or comprehension criterion scores.

(3) Treatment three produced gains which were significantly greater on the comprehension criterion scores.

(4) Treatment one produced gains which were significantly greater than those produced by Treatment three and the non treatment group.

(5) Knowledge of treatment was predictive of vocabulary, comprehension and total reading posttest scores over and above all other predictor variables included in the study.

Yuthas, Ladessa Johnson. Student tutors in a college remedial program. Journal of Reading, January 1971, 14, 231-34, 271.

Examines the use of student tutors in a college remedial program at Metropolitan State College of Denver, Colorado. To test the effectiveness of the program, two experimental groups were chosen--one receiving reading instruction with college students as tutors and one group enrolled in traditional remedial classes with faculty members as instructors. Low scores on the Nelson-Denny Reading Test, given as a part of the orientation testing program, indicated need for remedial reading courses. Individuals were matched on four criteria--ACT composite score, ACT English score, high school grade point average, and sex. A control group was chosen for each experimental group, matched on the same criteria within the same limits. Only students who were first-time enrollees in college were

included in the study. Thirty-one were in each of the four resulting groups. t-Tests of differences between means showed no significant differences between groups on the four matching criteria. Criterion measures of success of the program were persistence in college (made by means of chi square) and grade point average. Although correlation does not imply causation, it is safe to assume that enrollment in a remedial reading program at Metropolitan State College is significantly related to persistence in college and to resistance to extraneous influences which might lead to withdrawal. The relationship between having taken reading and having persisted in college would indicate that low achievers should be encouraged or required to take remedial reading. Intensive remedial reading courses should be offered during the summer before the student enrolls full time. Tables accompany the study.

Zaccaria, Lucy; Crease, James; Jacbos, Mitchell; and Carello, Carmen. Disadvantaged students in the traditional university reading improvement program. Journal of Reading Behavior, Fall 1972, 4, 12-17.

Assesses the effectiveness of a traditionally oriented college reading improvement program for fifty-nine culturally disadvantaged students and 118 regular students.

The research reviewed examined studies which identified factors contributing to successful as well as non-successful college developmental reading programs. It was

of interest to note that much of the research was done at community colleges and that research procedures which Robinson (1950) described thirty years ago were still used to investigate the effectiveness of reading programs. These procedures included then, as now, a comparison of an "experimental" group with a control group in terms of scores in standardized reading tests and academic performance (grade point average and attrition). Then, as now, findings were attributed to various factors: variety of learning modes, peer tutoring, small group learning, textbook readability, student self-concept, attitude, and interest, individualized instruction, positive classroom climate, teacher accountability, development of vocabulary and comprehension, cognitive and affective levels of development, and others. The table included categorizes the research according to the various factors. Researcher, date of study, and title of study are included under each factor heading and arranged according to year. Since the research reviewed generally indicated that college developmental programs are necessary, the following recommendations should be examined and considered.

The following recommendations were derived from the research which identified factors contributing to successful or nonsuccessful college developmental programs.

Gullo (1980) reporting on the factor academic achievement stated the results of the study indicated that

students who need remedial reading should be encouraged by advisors to enroll in such courses, because in all three situations studied, students who took remedial work scored higher on the Accounting I final exam.

Streichler (1980) reporting on the factor of accountability stated that strong skills in interpersonal relationships, positive attitudes and behaviors, and knowledge and techniques for teaching certain specific reading skills were more highly regarded than general pedagogical skills and skills related to professional and personal development. The outcomes of this study, a list of competencies for college developmental and remedial reading teachers in two year post-secondary institutions may be used to: (1) provide the basis for pre-service and in-service training programs, (2) as an aid in recruitment of effective teachers, and (3) as a guide for establishing competency requirements in related disciplines.

Lesnick (1980) reporting on the factor of assessment of effectiveness recommended that research be conducted to determine: (1) persistence and academic performance of developmental students after leaving the developmental program and entering regular college credit programs; (2) the influence of various methods and types of treatment in developmental reading on the ability to read technical material; (3) the correlation between traditional programs and instructional processes in effecting improved reading

comprehension for developmental students; and (4) the importance and optimal numbers for class size in developmental reading instruction.

Hargrove (1977) reporting on the factor of cognition indicated the following: (1) that the Piagetian cognitive development level of the student is a significant variable in the comprehension of written science materials; (2) the logical complexity of the written passage is a significant determinant of comprehension difficulties. Unfortunately, logical complexity is not measured by readability formulas; (3) logical reasoning ability and reading comprehension are complementary processes dependent upon the development of the logical operations posited by Piaget.

Whitt (1980) reporting on the factor of comprehension concluded that a comprehension emphasis procedure could improve all reading skills and, more specifically, the skill of comprehension, to a much greater extent.

Sheridan (1979) reporting on the factor of nontraditional students recommended recruiting nontraditional students and the following: administer a battery of tests on admission to identify those students remedial in basic skills so that they may be properly advised, offer courses in remedial reading and study skills, and establish a minimal level of competency for admission to the university, as well as a criterion level for referral to remedial reading.

Turner (1974) reporting on the factor of quarterly point average suggested that student participation in a developmental program which consists of more than one developmental component is beneficial. The combination of offering reading, study skills, counseling, and tutoring based on an individualized evaluation of the student's problem was apparently influential in raising mean QPA both immediately and over a period of time. The main thrusts of a developmental program were seen by the staff to be: (1) assisting a student in the development of necessary academic skills; and (2) developing attitudes which would enable the student to use these skills independently.

Gunselman (1971) reporting on the factor of individualized instruction recommended instructional patterns that could be accommodated to the individual needs of all students. Students in this study finished with generally higher scores, the system was economically efficient, and instructors were able to devote more time to individual needs.

Barnett (1979) reporting on the factor of positive classroom climate indicated a significant difference in mean reading achievement among classes categorized as having more positive classroom climate.

Ruppel (1978) reporting on the factor of reading rate recommended a self-managed reading improvement program. The results indicated a reading rate increase of 35 percent

and that students in all three experimental conditions showed a significant improvement in reading rate over those in the control group.

Ross (1972) reporting on the factors of peer tutoring and self-concept indicated gains in reading and self-concept when student was in the role of teacher than in the role of student.

Cherney (1975) reporting on the factor of textbook readability recommended application of readability formulas in selection of textbooks; matching reading ability with text readability and supplemental instructional methodology.

Santeusanio (1974) reporting on the factor of methodology/student characteristics recommended alternative instructional treatment for students with different characteristics to enhance scholastic achievement.

Yuthas (1971) reporting on the fact of persistence stated that the relationship between having taken remedial reading and having persisted in college indicates that low achievers should be encouraged or required to take remedial reading. Intensive remedial reading courses should be offered during the summer before the student enrolls full time.

Bassone (1973) recommended that greater emphasis be placed on the teaching of reading, better diagnostic procedures, individualized instruction, restructuring remedial

courses, providing tutorial services and additional, more controlled research.

Thomas (1974) recommended (1) a dual-modal presentation to be used in the teaching process, (2) libraries consider purchases in the auditory mode, and (3) new vocabulary or subject matter concepts as well as remedial reading instruction be presented in the dual-modal format.

All the preceding recommendations substantiate the need for developmental reading at the college level.

The purpose of this review was to provide a comprehensive look at ten years of research in the field of developmental reading at the college level. In focusing on objectives, methodologies, findings, and recommendations, the reviewer hoped to substantiate the necessity of such research which becomes viable through classroom use.

Vocabulary

Wright (1973)	An experimental study comparing the differential effectiveness of three developmental reading treatments upon the rate, vocabulary, and comprehension skills of white and black college students
Wolfe (1975)	An examination of teaching a reading vocabulary upon writing vocabulary in student compositions
Kerstiens (1978)	The effects of a typical community college developmental reading course on the phonics disablement of students
McMurray (1979)	College students' word identification strategies

Academic Achievement

Payne (1971)	The effects of participation in college reading improvement program on retention of reading skills and academic achievement
Pepper (1971)	The study skills and academic achievement of marginal admission students
Fairbanks (1975)	The effect of college reading improvement programs on academic achievement
Parham (1977)	Academic success of persistent and nonpersistent students voluntarily enrolled in a university reading program
Gullo (1980)	The relationship between remedial math and reading courses and Accounting I final exam scores at the community college of Allegheny County, Boyce Campus
Moore (1980)	Differential effects of arithmetic and reading abilities, field dependence, and mathematics anxiety on problem solving achievement of developmental mathematics students in a community college

Accountability

Streichler (1980)	Competencies for teachers of college developmental and remedial reading in two year post secondary institutions
Swindling (1981)	Credibility through accountability in a community college reading program

Assessment of Effectiveness

Bowers (1971)	The evaluation of a special educational opportunities program for disadvantaged college students

Ratekin (1971)	The effect of two different reading programs on culturally disadvantaged college freshmen
Losak (1972)	Do remedial programs really work?
Tillman (1972)	Measuring outcomes in college reading programs
Solomon (1972)	A quantitative and qualitative analysis
Tillman (1973)	Four year college reading improvement programs and grades: an annotated review 1945-1971
Anderson (1975)	Evaluation of college reading and study skills problems and approaches
Florio (1975)	An assessment of the effectiveness of remedial reading courses at San Antonio College
Huslin (1975)	What's happening in college and university developmental reading programs: report of a recent survey
Reese (1976)	Effectiveness of a college reading program
Gaston (1977)	A descriptive analysis of developmental program curriculums funded by Title III grants at seven select developing institutions of higher education
Aron (1978)	A community college reading and study skills program: what is it, what does it do?
Staley (1979)	An evaluation of the effectiveness of a college reading program using four criteria
Flippo (1979)	Comparison of college students reading gains in a developmental reading program using general and specific levels of diagnosis

Rainwater (1975)	Comprehension characteristics of Chicano and non-Chicano students at Eastern New Mexico University
Reese (1976)	Effectiveness of a college reading program
Robertson (1977)	The effects of different rates of recorded speech on the listening comprehension of adult remedial readers
Raisner (1978)	Adult reading strategies: do they differ from the strategies of children?
Whitt (1980)	Reading comprehension: an analysis for developmental reading programs in institutions of higher education

Developmental/Remedial Programs

Zaccaria (1972)	Disadvantaged students in the traditional university reading improvement program
O'Tuel (1974)	Thursday's children--examines a remedial program at Palmer College, South Carolina
Guthrie (1978)	Reviews research clues from research on programs for poor readers
Reinertson (1978)	The problems of literacy in the community college
Baranchik (1979)	A remediation program in an urban college
Santa (1979)	A college reading program: the integration of reading, writing, speaking, and thinking within the content areas
Sheridan (1979)	Meeting the reading and study skills needs of nontraditional college students for the 80's

Grade Point Average (GPA)--Longevity in College

Tillman (1973)	Four year college reading improvement programs and grades: an annotated review

Turner (1974)	The effect of a developmental program on university grades
Katz (1977)	The effects of a reading and study skills program on academic performance and perseverance
Ross (1980)	A study of the effectiveness of the Reading 104 developmental class at Metropolitan State College
Swindling (1981)	Credibility through accountability in a community college reading program

Individualized Instruction/Learning

Gunselman (1971)	A feasibility study for individualized instruction of college freshmen in two basic areas of general education
Drummond (1975)	Internal-external control construct and performance in an individualized community college reading course

Positive Classroom Climate

Barnett (1979)	Achievement and self-concept of male and female students in community college remedial reading classrooms with varying observed and perceived climates

Reading Ability and Semantic Verification

Hanson (1977)	The relationship between reading ability and semantic verification tasks

Reading Rate

Bryan (1971)	The effectiveness of a developmental reading course in a college of nursing
Wright (1973)	An experimental study comparing the differential effectiveness of three developmental reading treatments upon the rate, vocabulary, and comprehension skills of white and black college students

Raisner (1978)	Adult reading strategies: do they differ from the strategies of children?
Ruppel (1978)	A self-managed reading improvement program
Whitt (1980)	Reading comprehension: an analysis for developmental reading programs in institutions of higher education

Review of Research in College and Adult Reading

Bliesmer (1972)	Programs and practices for college reading
Thompson (1976)	Helping the high risk student in higher education: a description of research studies reporting success utilizing study skills/remedial programs

Self-Concept--Attitude

Phillips (1971)	The relative effectiveness of three instructional approaches upon the reading, study habits, attitudes, and academic performance of disadvantaged black college freshmen
Ross (1972)	A study to determine the effect of peer tutoring on the reading efficiency and self-concept of disadvantaged community college freshmen: final report
Dowdle (1977)	An analysis of the relationship between self-concept and academic performance of high and low performers in a collegiate school of business
Diggs (1980)	The relationships among classroom verbal interaction, reading achievement, and attitude toward reading of college students enrolled in a developmental reading program

Textbook Readability

Cline (1973)	Readability of community college. textbooks and the reading ability of the students who use them
Kurzman (1974)	The reading ability of college freshmen compared to the readability of their textbooks
Cherney (1975)	Relationships of reading ability of remedial track university freshmen to text readability and instructional methodology
Hoeppel (1980)	A taxonomical analysis of questions found in reading skills development books used in Maryland community college/developmental remedial reading programs

Tutoring

Yuthas (1971)	Student tutors in a college remedial program
Ross (1972)	A study to determine the effect of peer tutoring on the reading efficiency and self-concept of disadvantaged community freshmen: final report
O'Donnell (1974)	An experimental study of the effects of the supplemental use of a psycholinguistic remedial tutorial program on the reading and writing behaviors of high-risk college freshmen and on their attitudes toward reading, writing, and other college-related stimuli
Hedges (1976)	A longitudinal comparative study of a process oriented tutorial program

Variety of Teaching/Learning Modes

Askov (1971)	Development of specific reading skills in adult education
Curry (1971)	A comparison of four practice schedules in college developmental reading classes

Diggs (1972)	The relative effectiveness of the SQ3R method, a mechanized approach and a combination method for teaching remedial reading to college freshmen
Phillips (1972)	The relative effectiveness of three instructional approaches upon the reading, study habits, attitudes and academic performance of disadvantaged black college freshmen
Swalm (1972)	A content approach to reading skill development for special admit students in a four year college
Bossone (1973)	Three modes of teaching remedial English
Farrell (1973)	Analysis of some effects of different approaches to educating academically high risk students
Wright (1973)	An experimental study comparing the differential effectiveness of three developmental reading treatments upon the rate, vocabulary, and comprehension skills of white and black college students
Miller (1974)	A comparative study of two approaches to teaching freshman remedial composition in a comprehensive community college
Santeusanio (1974)	Matching college reading instruction with student characteristics
Taylor (1974)	A simplified MMPI form with reduced reading difficulty
Thomas (1974)	Listening as an adjunct to remedial reading at the junior-community college level
Craddock (1975)	An examination of a heuristic approach to developmental reading in freshman English classes at Lynchburg College

Fronk (1975)	The effect of student reading level, type of instructional material and mode of instruction on time required to teach mastery-level learning
Simpson (1975)	The relationship of organizational factors to remedial techniques used in college and university reading clinics and centers
Berke (1976)	Employing educational cognitive style as a teaching aid for educationally disadvantaged college students
Allen (1977)	Student locus of control and teaching style
Hardison (1977)	A study to determine the comparative effectiveness of classroom teaching and a video self-instruction
Hayward (1977)	Effectiveness of a study management course for nontraditional students
Menendez (1978)	The effects of sentence combining practice on remedial college students' syntactic maturity, punctuation skills and reading ability
Prichard (1978)	Suggestopedia for the disadvantaged reader
Ruppel (1978)	A self-managed reading improvement program
Blum (1979)	The role of programmed instruction for sequential skill development in higher education
Abartis (1980)	The effect of writing instruction and reading methodology upon college students' reading skills
Emeruwa (1981)	Students evaluative perception of two modes of developmental reading instruction at an urban community college